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## CLIMATOLOGICAL DATA

19

## MISSOURI SECTION

ROSCOE NUNN  
ST. LOUIS, MO.

Vol. XL

JANUARY 1936

No. 1

PRICE: 5 CENTS A COPY; 50 CENTS A YEAR

NEW ARRANGEMENT OF TABLES OF CLIMATOLOGICAL DATA; REVISED  
NORMALS OF PRECIPITATION

Beginning with January 1936, the tables of data for Missouri will be arranged in three divisions, viz., Northern Division, Southwestern Division, and Southeastern Division, superseding the former plan of publishing data in five divisions designated as Northeast Plain, Southeast Lowlands, Ozark Plateau, Southwest Plain, and Northwest Plateau.

The three-division plan was adopted some time ago in the publication, "Climatic Summary of the United States", known as Bulletin W, and it is thought advisable to arrange the tables in the same way for Monthly and Annual Climatological Data.

In the new arrangement the Missouri River is used as the southern border line of the Northern Division, and that part of the State lying south of the Missouri River is divided into two parts, viz., Southwestern and Southeastern.

A change is made in the table of "Comparative Data" relative to precipitation, some items formerly given being omitted in order to give the averages for each of the three divisions as well as for the State as a whole.

New normals of precipitation have been computed, using data for the 35 year period, 1898-1932, and establishing "standard means", in conformity with a rule adopted for the whole United States, effective January, 1936.

## GENERAL SUMMARY

During the first two weeks unusually mild weather prevailed almost continuously. This was in strong contrast with the severe cold period just preceding (December 19-31). But about January 18 a sharp change to colder occurred, which introduced one of the coldest periods of record in Missouri. The last ten days of January 1936 will long be remembered for its sub-zero temperatures. In the northern third of the State minimum readings were as low as 20° below zero at many stations, and at one station 25° below was registered. Sub-zero readings were registered day after day: As low as 15° below occurred in the southwestern quarter and 14° below in the southeast. As low as 5° below occurred along the southern border. At St. Louis the average temperature for the last ten days was the third lowest for any ten-day period of record (last 63 years), having been surpassed only by ten-day periods in February 1899 and January 1912.

Precipitation averaged somewhat more than normal in the Northern Division, but was much less than normal at most stations in the southwestern and southeastern quarters. Springfield reported the driest January of record. In the Southwest the average, 0.56 inch, was the least January average since 1919, and in the Southeast the average, 0.77 inch, was the least for January since 1911.

Moderate to heavy snows fell in the northern third of the State, which protected wheat and other winter grains, but in the southern half there was very little snow protection. Conditions were rather favorable for outdoor operations the first two weeks, but thereafter farm work was suspended almost generally. Wheat was considered in fairly good condition except in some southern areas it was thought to be badly frozen about the last week of the month. Peach buds were reported badly hurt in northern and western sections.

River stages were very low. Unusually heavy formations of ice occurred the last ten days. Small streams were frozen and there was much heavy floating ice in the Missouri and the Mississippi.

## TEMPERATURE

The monthly mean temperature for the State, 70 stations reporting, was 24.4°, or 6.4° below normal. The highest monthly mean was 33.8° at Caruthersville, and the lowest monthly mean was 12.1° at Maryville. The highest temperature recorded was 74° at Garber on the 12th, and the lowest was -25° at Conception on the 27th. The greatest daily range was 49° at Garber on the 12th.

## PRECIPITATION

The average precipitation for the State, 123 stations reporting, was 1.01 inches, or 1.30 inches less than normal. The greatest local monthly amount was 3.61 inches at King City, and the least local monthly amount was 0.05 inch at Galena and Seligman. The greatest amount in any twenty-four hours was 1.20 inches at King City on the 2d. The average number of days

(Continued on page 4)

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind				Relative humidity			Percentage of sunshine
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	7 a. m.	12 noon	7 p. m.	
Columbia.....	30.10	30.75	27	29.49	3	9.0	25	nw.	22	82	71	73	47
Kansas City.....	30.11	30.81	27	29.52	3	9.9	32	n.	22	82	66	73	57
St. Joseph.....	30.11	30.78	27	29.51	3	8.6	26	nw.	3	85	71	80	62
St. Louis.....	30.09	30.68	28	29.50	12	12.1	39	sw.	12	81	68	70	33
Springfield.....	30.07	30.73	27	29.54	17	11.0	28	sw.	12	79	63	66	45
Cairo, Ill.....	30.10	30.67	27	29.61	17	9.9	30	n.	18	83	71	73	46
Keokuk, Iowa.....	30.14	30.71	28	29.52	12	8.3	28	nw.	22	84	65	78	62

## COMPARATIVE DATA FOR JANUARY

Year	Temperature			Precipitation					Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. in. or more	Clear	Partly cloudy	Cloudy
1888.....	21.5	74	-32	2.14	1.76	2.20	2.47	....	6	..	..	..
1889.....	31.8	69	-2	2.53	1.65	2.48	3.45	....	6	..	..	..
1890.....	33.8	81	-19	5.16	3.23	4.12	8.14	....	9	..	..	..
1891.....	34.1	74	-1	1.62	1.36	0.95	2.56	4.3	6	..	..	..
1892.....	24.0	67	-31	1.87	1.80	1.87	1.93	....	4	14	..	..
1893.....	22.5	66	-14	0.44	0.51	0.40	0.42	2.4	3	9	11	11
1894.....	31.4	77	-35	2.48	1.90	2.96	2.59	2.7	5	13	9	9
1895.....	24.7	78	-22	1.65	0.97	1.41	2.57	9.4	5	14	..	..
1896.....	32.9	71	-9	1.18	1.05	0.82	1.67	3.1	4	10	..	..
1897.....	28.4	72	-16	5.24	4.18	5.50	6.04	4.0	8	12	..	..
1898.....	34.3	75	-10	4.11	4.02	3.84	4.44	8.4	9	11	..	..
1899.....	30.2	70	-21	1.93	0.62	1.20	3.98	4.0	6	12	..	..
1900.....	34.5	77	-9	1.28	0.98	1.18	1.67	0.2	4	14	..	..
1901.....	35.0	72	-11	1.31	1.21	1.45	1.27	0.8	4	17	..	..
1902.....	30.1	72	-17	1.36	1.07	0.95	2.05	6.9	5	16	..	..
1903.....	31.4	73	-11	1.49	1.07	1.41	1.98	5.0	6	13	..	..
1904.....	27.0	66	-23	3.01	2.64	2.74	3.66	7.4	8	14	..	..
1905.....	22.3	72	-19	2.04	1.06	2.10	2.95	6.8	8	14	..	..
1906.....	35.6	77	-8	3.44	2.20	3.07	5.04	9.2	6	14	..	..
1907.....	34.3	79	-5	5.04	4.14	5.28	5.69	2.8	12	7	..	..
1908.....	34.4	68	-10	1.67	0.50	1.47	3.04	3.6	5	19	..	..
1909.....	33.7	83	-20	2.36	2.01	1.70	3.36	6.5	7	6	..	..
1910.....	32.3	78	-24	1.82	1.96	1.73	1.78	3.5	5	13	..	..
1911.....	34.6	78	-19	0.84	1.57	0.32	0.64	0.7	5	8	..	..
1912.....	20.0	70	-36	1.22	0.35	0.79	2.51	6.5	4	14	..	..
1913.....	33.1	74	-12	4.18	1.53	2.63	8.58	2.6	8	13	..	..
1914.....	38.1	78	-1	1.45	0.96	1.43	1.95	1.0	4	12	..	..
1915.....	29.1	76	-24	2.88	2.29	2.48	3.86	5.4	8	12	..	..
1916.....	31.6	72	-24	7.65	5.22	8.32	9.42	3.4	12	9	..	..
1917.....	32.9	76	-10	1.56	0.75	1.05	2.87	2.3	5	15	..	..
1918.....	16.4	67	-24	1.73	1.05	1.45	2.69	16.6	7	12	..	..
1919.....	34.0	70	-23	0.46	0.14	0.32	0.91	1.4	2	20	..	..
1920.....	28.6	72	-5	1.74	0.52	1.35	3.35	5.7	5	15	..	..
1921.....	37.1	74	-1	1.88	1.42	2.07	2.15	5.4	6	10	..	..
1922.....	29.5	66	-6	1.33	1.08	1.41	1.50	3.9	5	14	..	..
1923.....	39.2	75	-3	2.58	0.77	2.21	4.77	0.6	6	12	..	..
1924.....	24.9	68	-25	1.60	1.00	1.64	2.06	5.7	7	14	..	..
1925.....	29.7	65	-15	1.04	0.42	1.26	1.45	4.7	4	15	..	..
1926.....	32.7	70	-20	1.93	1.27	1.91	2.60	4.2	6	11	..	..
1927.....	30.8	73	-24	3.04	0.90	2.42	5.81	3.6	6	13	..	..
1928.....	33.3	72	-18	0.97	0.31	0.81	1.80	0.5	3	16	..	..
1929.....	25.1	77	-13	3.50	2.77	2.78	4.96	6.8	8	11	..	..
1930.....	20.8	78	-31	4.57	2.33	4.14	7.23	13.0	10	12	..	..
1931.....	36.0	76	-5	0.73	0.39	0.65	1.15	2.0	4	16	..	..
1932.....	36.4	73	-7	3.51	1.74	3.18	5.61	1.0	4	10	..	..
1933.....	41.4	72	-8	2.57	1.71	1.64	3.37	0.5	6	14	..	..
1934.....	36.1	71	-6	1.33	0.87	1.31	1.82	1.5	5	13	..	..
1935.....	33.0	71	-12	2.57	1.47	2.44	3.81	0.5	7	12	..	..
1936.....	24.4	74	-25	1.01	1.69	0.56	0.77	7.6	7	11	..	..
Period.....	30.8	83	-36	2.31	1.56	2.09	3.27	4.4	6	13	6	12



## Climatological Data for January 1936

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches				Number of days			Prevailing direction of wind	Observers		
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelted	With precip., .01 inch or more	Clear			Partly cloudy	Cloudy
Northern Division																				
Bethany	Harrison	916	41	14.6	-10.2	43	12†	-22	31	42	2.67	+1.48	0.67	21.6	10	17	1	13	nw.	A. S. Cumming
Brunswick	Chariton	652	55	21.2	-5.5	60	12	-20	27	47	1.61	+0.02	0.65	12.5	10	14	3	14	nw.	O. K. Benecke
Chillicothe	Livingston	779	27	16.0	-10.8	52	12	-21	27†	41	1.96	+0.48	0.63	20.8	9	14	4	13	nw.	Wm. J. Olenhouse
Clifton Hill	Randolph	731	37	20.6	-7.5	57	12	-20	27	42	1.75	+0.03	0.45	15.9	11	10	9	12	nw.	Dr. A. J. Bradsher
Columbia	Boone	784	46	22.8	-6.4	64	12	-16	27	45	0.93	-0.99	0.48	8.5	12	10	7	14	w.	U. S. Weather Bureau
Conception	Nodaway	980	47	12.6	-12.1	41	10†	-25	27	35	2.67	+1.88	0.87	21.8	10	9	9	13	nw.	Fr. Adelhelm Hess
Downing	Schuyler	876	15	16.4	-9.0	53	12	-20	23	41	1.81	+0.49	0.40	18.8	9	18	1	12	w.	James Taylor
Edgerton	Platte	856	16	16.6	-10.3	52	13	-23	27	45	1.79	+0.94	0.82	10.6	13	14	0	14	n.	Fred L. Stiff
Elsberry	Lincoln	449	5	23.0	.....	69	12	-20	28	42	1.21	.....	0.60	7.0	6	6	17	8	nw.	Ray E. Mills
Fayette	Howard	680	56	21.6	-5.4	60	12	-21	27	44	1.36	-0.43	0.50	11.1	6	13	6	12	n.	Harry P. Mason
Fulton	Callaway	818	48	22.2	-7.3	67	12	-18	27†	40	0.99	-10.3	0.42	10.2	8	11	5	15	nw.	Clyde C. Herring
Gorin	Scotland	700	49	.....	.....	.....	.....	.....	.....	.....	2.01	+0.63	0.39	19.5	11	18	3	10	nw.	W. L. Harker
Graett City	Worth	1,134	32	12.5	-12.3	43	14	-22	25†	42	2.52	+1.55	0.94	26.0	11	7	10	14	nw.	Howard Rybolt
Hannibal	Marion	759	44	19.7	-7.4	63	12	-17	23†	42	1.18	-0.54	0.46	13.3	11	10	7	14	nw.	Hannibal Water Dept.
Kansas City	Jackson	963	47	21.7	-6.5	56	13	-8	27	43	1.17	-0.02	0.69	5.9	10	7	10	14	nw.	U. S. Weather Bureau
Kidder	Caldwell	1,020	44	13.4	-12.6	46	11†	-21	27†	41	1.92	+0.70	0.84	16.8	9	14	6	11	nw.	Roscoe L. Terry
King City	Gentry	1,095	10	.....	.....	.....	.....	.....	.....	.....	3.61	+2.47	1.20	33.7	12	4	15	12	nw.	John M. Martin
Kirksville	Adair	969	47	18.0	-6.8	51	12	-18	23	40	1.50	-0.02	0.30	20.0	10	13	5	13	nw.	Prof. J. S. Stokes
Linneus	Linn	816	4	.....	.....	.....	.....	.....	.....	.....	1.68	.....	0.70	13.8	10	17	3	11	uw.	J. Robert Hall
Louisiana	Pike	469	42	21.2	-6.9	65	12	-18	28	42	0.72	-1.43	0.33	7.5	5	17	6	8	s	Stark Bro's Nurseries
Macon	Macon	875	37	17.4	-10.1	57	12	-19	27	35	1.30	-0.40	0.39	12.5	8	11	6	14	nw.	W. C. Brown
Maryville	Nodaway	1,169	46	12.1	-10.8	42	11	-24	27	35	2.76	+1.76	1.15	32.0	14	15	2	14	nw.	R. B. Montgomery
Mexico	Audrain	800	47	19.8	-8.2	64	12	-17	27†	36	0.91	-1.12	0.30	8.7	8	9	4	18	nw.	Mrs. Abbie Snoddy
Monroe City	Monroe	748	15	.....	.....	.....	.....	.....	.....	.....	1.09	-0.82	0.42	9.7	5	14	9	8	s.	J. S. Conway
Oregon	Holt	1,048	80	15.4	-8.7	47	10†	-19	27	43	2.79	+1.86	1.07	26.0	11	17	3	11	nw.	Miss Mina Wright
St. Charles	St. Charles	520	48	22.4	-8.6	68	12	-15	27	39	1.35	-0.80	0.82	10.4	8	12	9	9	nw.	Martin L. Comann
St. Joseph	Buchanan	967	26	16.8	-11.1	51	13	-17	27	38	2.62	+1.75	1.10	24.0	11	14	7	10	nw.	U. S. Weather Bureau
Shelbina	Shelby	779	43	.....	.....	.....	.....	.....	.....	.....	1.75	+0.22	0.80	19.0	5	.....	.....	.....	.....	J. C. Jewett
Steffenville	Lewis	650	38	18.6	-8.8	54	12	-20	27	43	2.07	+0.06	0.50	13.0	9	14	6	11	n.	Frank Hall
Tarkio	Atchison	916	33	12.2	-10.7	43	10	-20	27	44	2.39	+1.65	0.70	36.0	9	18	3	10	nw.	Albert Volker
Trenton	Grundy	822	40	16.6	-9.7	46	12†	-18	27	36	1.95	+0.61	0.60	20.7	11	9	11	11	n.	W. H. Estes
Unionville	Putnam	1,062	43	12.6	-10.9	47	14	-19	23†	43	2.26	+0.54	0.42	23.2	9	13	3	15	n.	John H. Schick
Warrenton	Warren	816	54	24.3	-4.9	69	12	-16	27	45	1.52	-0.67	0.70	11.0	7	11	10	10	nw.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.	614	65	17.2	-7.7	56	12	-18	22	40	1.74	+0.18	0.36	14.6	16	11	8	12	nw.	U. S. Weather Bureau
Division means and extremes		.....	.....	17.9	-8.8	69	12	-25	27	47	1.69	+0.29	1.20	16.9	10	13	6	12	nw.	
Southwestern Division																				
Appleton City	St. Clair	853	41	26.8	-4.5	61	12	-5	27	34	0.52	-1.32	0.33	1.8	7	10	10	11	nw.	W. G. Bigelow
Buffalo	Dallas	1,200	6	.....	.....	.....	.....	.....	.....	.....	0.30	.....	0.14	0.8	3	11	4	16	.....	C. M. McCallister
Caplinger Mills	Cedar	750	10	.....	.....	.....	.....	.....	.....	.....	0.35	-1.57	0.30	0.5	2	13	4	14	nw.	Ozark Utilities Co.
Clinton	Henry	765	43	25.7	-6.0	60	12	-7	27	34	0.74	-1.29	0.37	2.5	5	7	10	14	sw.	A. E. Derwent, M. D.
Concordia	Lafayette	784	21	.....	.....	.....	.....	.....	.....	.....	1.01	-0.53	0.44	7.7	8	13	2	16	nw.	Mrs. W. H. Stratman
Dean H.	McDonald	1,000	32	30.0	-5.9	66	12	-6	30	43	0.07	-2.46	0.04	1.0	2	8	11	12	nw.	H. F. Dean
Eldon	Miller	934	41	23.6	-7.5	69	12	-11	28	38	0.24	-1.52	0.09	3.5	4	9	15	7	ne.	E. H. Shepherd
Garber	Taney	950	1	31.1	.....	74	12	-3	27	49	0.21	.....	0.15	T.	3	6	8	17	n.	William H. Durham
Hailey	Barry	1,350	11	.....	.....	.....	.....	.....	.....	.....	0.12	-2.80	0.12	0	1	5	10	16	se.	A. W. Madison
Harrisonville	Cass	904	58	20.4	-6.9	56	13	-9	27	40	1.22	-0.35	0.72	4.5	5	6	6	19	nw.	John H. Patterson
Jefferson City	Cole	557	46	23.4	-6.4	69	12	-13	27	35	1.14	-0.84	0.42	6.7	10	4	15	12	n.	Mrs. Frank Kliegel
Lamar	Barton	980	48	28.2	-3.9	64	11†	-2	27†	36	0.35	-1.48	0.35	T.	1	14	3	14	nw.	Jesse A. Mann
Lamonte	Pettis	867	35	24.2	-4.7	60	12	-15	27	40	0.73	-1.20	0.20	5.0	7	6	18	7	nw.	J. E. Wheeler
Lebanon	Laclede	1,265	48	26.4	-6.1	70	12	-9	27†	39	0.25	-2.39	0.14	2.0	3	16	4	11	w.	Mrs. Lou Mulcare
Lexington	Lafayette	688	51	20.3	-7.5	55	13	-13	27	37	1.55	+0.03	0.59	8.4	10	18	5	8	nw.	Miss Carrie Loomis
Lockwood	Dade	1,078	30	30.2	-3.1	66	12	-4	27	28	0.52	-1.34	0.45	0.5	3	11	5	15	nw.	Hubert A. Nieman
Marshfield	Saline	779	49	21.3	-6.6	60	12	-15	27	42	1.39	-0.26	0.50	12.0	7	18	2	11	sw.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	35	27.8	-5.0	69	12	-9	27	32	0.64	-2.09	0.29	4.0	6	16	8	7	n.	Mo. Fruit Exp. Sta.
Neosho	Newton	1,011	49	31.0	-4.1	68	13	-3	27	44	0.24	-2.23	0.19	T.	3	10	10	11	se.	U. S. Fisheries Sta.
Nevada	Vernon	862	43	28.2	-3.7	61	12	-5	27	31	0.54	-1.29	0.46	0.8	2	12	6	13	nw.	George A. Kaupp
Seligman	Barry	1,542	35	31.6	-3.5	68	12	-3	27	34	0.05	-2.74	0.05	0.5	1	13	5	10	sw.	Floyd E. Fawver
Seymour (near)	Webster	1,642	30	28.0	-6.0	67	12	-8	27	30	0.34	-2.25	0.15	1.5	4	10	3	18	nw.	A. L. Hailey
Springfield	Greene	1,324	48	28.0	-5.5	68	12	-6	27	33	0.17	-2.17	0.07	0.6	7	8	10	13	nw.	U. S. Weather Bureau
Versailles	Morgan	1,087	4	25.4	.....	67	12	-13	27	35	0.73	-1.27	0.24	4.8	8	13	3	15	nw.	I. M. Wilson
Warrensburg	Johnson	878	49	23.2	-5.5	58	12†	-12	27†	38	0.77	-1.01	0.36	5.2	8	17	0	14	ne.	E. A. Markey
Warsaw	Benton	687	35	27.0	-5.9	65	12	-10	30	34	0.70	-1.44	0.32	3.0	4	12	4	15	n.	Everett Martin
Division means and extremes		.....	.....	26.4	-5.4	74	12	-15	27	49	0.77	-2.94	0.72	3.0	5	11	7	13	nw.	
Southeastern Division																				
Arcadia	Iron	926	55	27.0	-4.9	66	12	-8	27†	39	0.37	-2.62	0.11	1.4	6	11	8	12	nw.	Arcadia College
Birch Tree (near)	Shannon	1,000	41	29.0	-5.5	67	12	-6	27	36	0.56									



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## Daily Precipitation for January 1936—Continued from preceding page

Stations	Drainage-basins	Day of month																															Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Southeastern Div.—Concluded																																	
Farmington	St. Francis						.40		.14										.01				.02	.10		T.				T.	.06		0.72
Fisk	do	.06					.29		.17														.07	.18						.05		0.65	
Fredricktown	do						.30		.15										T.				.10							.16		0.79	
Goodland	Black		.25				.21		.07														.08							.10		0.73	
Greenville	St. Francis		T.				.11		T.														.05			T.	T.			.05		0.87	
Jackson	Mississippi	.08		.09			.48		.07										T.				T.	.05						.10		0.92	
Koshkonong	Black		.52		.07			.05	.18										T.				T.		.04	.07			T.		.15		0.97
Leeper	do		.11		.03		.03		.05															.20						.09		0.46	
Marble Hill	Mississippi		.15		.07		.32		.08														.03			.07				.02		0.61	
Meramec Park	Meramec		.20				.02		.05										T.	T.			.05							.02		0.61	
Morehouse	Mississippi		.09					.45				.02											T.	.05				T.		.05	.05	0.92	
New Madrid	do		.17		.12	T.	.25	.01	.10	.02		.12											T.	.03	.05	.03				.04		0.38	
Owensville	Gasconade		.08				.28		.04	.12														.03						.03		0.84	
Parma	St. Francis		.18				.41																	.20						.05		0.66	
Poplar Bluff	Black						T.		.12															.06						.06		1.32	
Rolla	Meramec		.29	T.			.04	T.	.15	.01	T.												.01	.10	.02	.27	.08			.01	.06	1.38	
St. Louis	Mississippi	.03					.23	.04	T.	.15	.01	T.								.02			.01	.20	.13					.02		1.38	
St. Louis University*	do	.01	.34				.20	.03	.12															.04						.03		0.74	
Salem	Meramec		.16		.05		.27		.19															.03	.05		.25			.10		0.85	
Sikeston	Mississippi		.27				.03		.08	.04														.05	.03	.03	.37			.06		1.14	
Union	Meramec		.32	T.			.18		T.	.10														.05	.02					.03	.01	0.35	
Valley Park	do						.13		.07	.10				.01									.03							.11		0.57	
Williamsville	Black		.19				.03		.16															.06	T.			.01		.07		0.95	
Willow Sprgs. (near)	White						.03		.16																								
Cairo, Ill.	Mississippi	.03	.02		.04	.29	.31		.08	T.																							

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. T. Trace, or less than 0.01 inch.  
 \*\* Precipitation measured in the morning; amount then recorded is for the preceding 24 hours.  
 \*\*\* Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. \*\* Precipitation in the next following measurement; separate dates of fall not recorded. \* Precipitation is for 24-hour period, midnight to midnight. † Estimated. ‡ Partially estimated. |||| Incomplete.

**Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for January 1936**  
 (See precipitation data in table on preceding page)

Station	Data	Day of month																															Monthly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Lakeside (Osage Dam)	{ Evaporation .....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	26.2
	{ Mean temperature ..	36	38	41	31	36	36	30	32	38	41	43	48	43	49	32	28	30	24	20	24	26	22	2	8	14	7	5	8	10	9	8	2,507
	{ Wind movement ..	71	78	85	89	77	70	90	41	74	55	46	58	75	93	110	65	79	111	115	93	80	90	138	51	80	90	115	68	46	81	93	

Observations taken at 7.30 a. m. Wind movement corrected to true velocities. For description see April 1932 report.  
 .... Record incomplete; pan being repaired or frozen until 17th. Frozen after 17th.

*Continued from page 1*

with 0.01 inch or more of precipitation was 7. The snowfall for the State averaged 7.6 inches, or 3.2 inches more than normal. The greatest local monthly snowfall was 36.0 inches at Tarkio.

**MISCELLANEOUS PHENOMENA**

Earthquake.—12th, at New Madrid.  
 Fog.—Dense, 2d, 6th, 7th, 8th, 15th, 31st.

Glaze.—17th.  
 Halos.—Solar, 3d, 9th, 11th, 14th, 15th, 16th, 19th, 20th; lunar, 1st, 3d, 4th, 8th, 9th, 10th, 14th, 29th.  
 Meteor.—10th; observed in Bollinger, Cape Girardeau, and Perry counties.  
 Sleet.—1st, 2d, 6th, 8th, 10th, 16th, 17th, 18th.  
 Smoke.—Dense, 13th, 28th.  
 Thunderstorms.—5th, locally.  
 Windstorms.—No damaging winds reported.



## Daily Temperatures for January 1936

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Northern Division																																	
Brunswick.....	Maximum.....	40	48	45	43	37	38	28	36	38	40	49	60	48	51	47	31	29	27	21	32	34	37	5	9	13	9	6	13	13	11	15	30.7
Chillicothe §§.....	Minimum.....	33	32	31	18	22	26	17	23	23	23	24	35	22	35	16	22	26	17	-1	1	26	-10	-11	-2	-9	-17	-20	-14	-1	-12	-15	11.6
Columbia.....	Maximum.....	36	35	42	26	35	29	28	34	38	42	51	52	45	50	33	32	26	21	20	33	31	4	7	5	14	4	3	10	2	10	16	26.5
Fayette.....	Minimum.....	18	25	30	17	14	24	14	15	17	17	23	26	17	19	12	11	19	11	-9	-8	-6	-4	-15	-11	-11	-17	-21	-12	-8	-12	-21	5.6
Grant City.....	Maximum.....	42	37	47	33	39	38	31	37	40	43	51	64	53	54	30	31	28	24	33	40	35	5	10	14	6	7	14	14	13	15	30.9	
Hannibal.....	Minimum.....	32	33	32	23	28	26	22	31	26	31	28	33	28	29	18	25	28	18	8	5	32	-10	-10	-4	-2	-7	-16	-8	-6	-9	-12	14.7
Kansas City.....	Maximum.....	38	38	48	41	39	37	31	36	38	45	49	60	50	51	44	31	31	24	33	39	35	5	10	13	10	5	12	13	12	14	21.7	
Kidder §§.....	Minimum.....	32	33	31	21	23	30	20	25	25	26	32	32	23	32	17	23	25	18	4	3	23	-9	-11	-5	-5	-12	-21	-16	0	-19	19	12.0
Louisiana.....	Maximum.....	38	34	34	34	28	24	22	27	32	36	42	40	36	43	32	17	22	22	12	15	26	26	-5	1	2	2	4	9	10	12	5	21.7
Macon §§.....	Minimum.....	32	32	27	5	11	20	11	14	11	17	21	30	7	30	4	6	12	5	-14	-18	7	-16	-17	-7	-22	-22	-20	-10	-20	3.3		
Maryville.....	Maximum.....	38	36	44	40	35	35	35	35	34	37	41	63	38	51	44	28	28	20	25	34	28	-1	6	11	7	6	12	12	10	12	28.1	
Mexico §§.....	Minimum.....	30	32	31	22	18	30	19	24	26	22	26	30	17	31	15	20	23	19	-2	-1	20	-14	-17	-6	-6	-12	-17	-10	-1	-8	-12	11.3
Oregon.....	Maximum.....	39	35	41	33	39	33	23	33	39	43	55	51	56	52	29	26	30	23	18	39	36	37	5	13	13	6	11	16	13	11	15	29.5
St. Joseph.....	Minimum.....	35	31	29	19	30	18	16	23	18	27	30	34	27	29	19	19	23	6	-2	4	25	-6	-7	0	4	-8	1	-1	-2	-3	13.9	
Trenton.....	Maximum.....	37	34	40	23	34	27	26	32	34	41	46	45	45	46	47	26	26	15	11	33	28	6	0	5	7	-3	0	10	3	5	11	23.1
Unionville §§.....	Minimum.....	24	30	27	8	8	21	13	11	11	23	24	14	14	10	10	13	8	-12	-11	-6	-4	-16	-13	-14	-18	-21	-21	-11	-10	-14	3.8	
Warrenton.....	Maximum.....	37	37	43	41	31	32	32	33	38	40	51	40	50	37	31	26	27	20	26	32	27	2	3	15	12	17	11	11	9	14	27.7	
Appleton City.....	Minimum.....	31	30	29	15	13	26	14	18	23	23	23	18	13	11	15	19	14	-10	-9	15	-13	-18	-5	-10	-16	-17	-11	-3	-10	-15	8.3	
Clinton.....	Maximum.....	40	37	40	38	30	34	30	36	36	42	44	65	42	55	36	28	27	30	30	30	35	32	0	10	12	3	12	12	10	13	28.8	
Eldon §§.....	Minimum.....	31	33	33	28	25	22	23	30	33	27	27	30	24	35	19	23	24	15	5	3	20	-10	-14	-4	-5	-10	-14	-18	9	-10	15	13.5
Garber.....	Maximum.....	40	34	45	28	35	32	31	35	35	37	52	57	43	53	24	32	26	23	22	32	32	1	3	5	13	3	5	10	8	9	14	25.4
Harrisonville §§.....	Minimum.....	25	30	30	19	18	26	16	23	23	24	20	29	17	19	14	15	21	16	-2	-3	1	0	-16	-11	-11	-15	-19	-16	-3	-10	-14	8.4
Maryville.....	Maximum.....	35	34	35	29	27	27	15	28	34	41	42	39	36	40	29	19	23	20	8	20	18	18	-2	2	6	0	0	8	7	5	6	20.9
Mexico §§.....	Minimum.....	32	29	25	2	14	15	9	14	8	19	20	29	10	29	5	7	11	3	-15	-15	6	-16	-16	-8	-12	-21	-24	-13	-18	-10	-16	3.3
Oregon.....	Maximum.....	42	37	47	31	36	36	32	35	38	43	49	64	49	55	27	32	31	23	24	33	31	8	6	10	15	8	1	14	14	13	16	29.0
St. Joseph.....	Minimum.....	24	30	30	24	21	25	20	19	25	25	26	28	23	23	16	17	23	18	6	2	2	5	-13	-13	-9	-11	-17	-6	-8	-12	10.5	
Trenton.....	Maximum.....	39	36	35	32	35	30	17	29	37	47	44	43	47	43	30	20	25	21	12	28	24	30	-1	4	7	2	5	11	10	7	11	21.5
Unionville §§.....	Minimum.....	31	26	26	5	17	15	9	16	12	25	25	32	15	30	10	10	14	4	-12	-7	9	-13	-13	-6	-12	-16	-19	-7	-11	-6	-11	6.4
Warrenton.....	Maximum.....	38	33	37	26	35	32	21	32	37	45	46	47	51	46	23	23	28	19	12	31	33	26	0	6	8	2	5	11	11	7	11	25.2
Appleton City.....	Minimum.....	33	28	26	12	23	14	12	21	14	26	26	31	20	23	13	14	19	-1	-9	4	13	-12	-11	-2	-9	-12	-17	-7	-5	-4	-12	8.5
Clinton.....	Maximum.....	37	36	40	35	33	31	28	33	31	41	43	46	39	46	34	26	26	24	18	26	28	24	-4	8	11	5	4	12	12	4	11	25.4
Eldon §§.....	Minimum.....	31	32	31	12	15	24	14	16	17	21	22	33	15	32	9	15	20	-10	-11	-10	15	-11	-15	-4	-10	-14	-18	-16	-11	-8	-16	7.7
Garber.....	Maximum.....	36	36	40	20	32	31	29	33	28	40	39	46	41	47	19	27	24	21	6	29	22	-5	-3	-3	6	0	4	12	-4	-4	-3	21.0
Harrisonville §§.....	Minimum.....	22	31	29	14	11	16	12	12	23	20	23	23	11	11	6	7	12	-14	-14	-15	-6	-19	-14	-6	-17	-19	-17	-5	-9	-14	4.1	
Maryville.....	Maximum.....	39	39	48	45	36	37	34	37	41	41	50	69	56	58	56	31	31	32	24	32	43	40	5	10	17	15	11	10	17	12	19	33.4
Warrenton.....	Minimum.....	31	32	32	25	25	32	25	29	29	29	28	34	25	38	17	24	25	21	9	6	22	-5	-13	-4	-2	-8	-16	-9	7	-7	-10	15.2
Southwestern Division																																	
Appleton City.....	Maximum.....	40	38	45	38	45	37	30	35	47	52	57	61	57	54	49	34	32	29	27	40	45	35	8	25	24	17	21	19	19	18	19	35.4
Clinton.....	Minimum.....	34	32	30	24	31	30	22	27	21	31	28	40	28	42	25	25	26	18	6	6	31	7	-4	1	1	-5	3	5	-1	-2	18.2	
Eldon §§.....	Maximum.....	41	38	41	41	44	43	33	36	43	52	54	60	58	50	45	32	34	33	25	38	43	35	15	20	19	11	10	20	17	16	20	34.4
Garber.....	Minimum.....	33	33	32	23	29	32	22	27	21	30	37	36	26	32	24	25	18	5	5	30	1	-6	-3	-1	-1	-7	0	-8	-1	-6	17.0	
Harrisonville §§.....	Maximum.....	38	45	42	38	45	34	32	37	47	49	59	69	60	52	30	30	32	23	38	34	22	2	16	20	9	10	19	16	19	18	32.5	
Jefferson City §§.....	Minimum.....	24	21	21	35	23	31	24	24	29	25	30	31	28	28	24	22	23	21	12	7	6	22	-7	-8	-2	-3	-10	-11	-2	-3	-9	14.8
Lamar §§.....	Maximum.....	40	39	59	46																												





## CLIMATOLOGICAL DATA

19

## MISSOURI SECTION

ROSCOE NUNN  
ST. LOUIS, MO.

Vol. XL

FEBRUARY 1936

No. 2

PRICE: 5 CENTS A COPY; 50 CENTS A YEAR

## GENERAL SUMMARY

The period of extremely cold weather that began about January 21 continued for a month, except two or three very brief intermissions, after which there was a return to above normal temperature conditions by February 23, and rather mild weather prevailed the last few days of the month. On the whole, it was the coldest February since 1905 in Missouri and the third coldest of the entire period of State-wide records (1888 to 1936). At St. Louis the 30-day period, January 22-February 20, was decidedly the coldest 30-day period of record (years 1873-1936). First among cold Februaries was February 1899, with an average for the State of 20.4°; the second coldest was in 1905, with 21.5°, and the third coldest was the one just passed, with 23.2°.

Temperatures were decidedly lower and more subnormal in the Northern Division than in the Southwestern and Southeastern Divisions. The Northern Division average was 16.3°, or 13.9° below normal; the Southwestern Division 24.6°, or 9.8° below normal, and the Southeastern Division, 28.7°, or 8.0° below normal. At Unionville, near the center of the northern border line, the average for the month was 9.6°, which is about like the normal February average for northern Minnesota.

This long severe cold spell brought the winter average (for months of December, January, February) down so that this winter stands in the front line of extremely cold winters for the State as a whole. For low average temperature, the winters of 1904-05 and 1917-18 come first, each averaging 25.6°, and the winter of 1935-36 comes next, with an average of 26.1°. Other very cold winters were: 1892-93, with 26.6°, and 1898-99, with 26.4°.

Precipitation was less than normal in all sections, but the deficiency was least in the Northern Division and most marked in the Southeastern. The average in the Northern and Southwestern divisions would have been appreciably less except for heavy rains on the 26th over a rather narrow belt extending from Cass and Henry counties northeastward to Lewis and Marion counties. Snowfall was heavy in some localities in northern and southeastern counties, but generally it was light or moderate, while in much of the Southwestern Division it was unusually light.

Wheat and other winter grains were well protected by snow cover in most of the northern half of the State, but in much of the Southwestern Division there was very little snow cover and wheat was thought to be badly winter-killed. Peach buds were reported largely killed in the northern section.

Rivers were frozen more completely than for many years. There was probably more ice than in the last preceding big freeze, January 1918. At St. Louis the river was frozen solid from February 10 to 21. Boys crossed the river on the ice on February 11 and several men crossed on the 12th. On the 21st the ice began to break and by the 25th the St. Louis harbor was clear, but heavy floating ice was passing on the 27th, 28th, and 29th. The ice broke up and cleared out of the Missouri and Mississippi rivers without causing any floods or much property damage. In the Grand River a flood occurred, princi-

pally in the Chillicothe area, due to ice conditions, which caused damage to bridges in that area amounting to about \$25,000.

(Continued on page 9)

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind				Relative humidity			Percentage of sunshine
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	7 a. m.	12 noon	7 p. m.	
Columbia.....	30.12	30.54	18	29.42	3	9.8	27	nw.	25	83	68	71	57
Kansas City.....	30.13	30.57	18	29.48	24	11.0	34	sw.	23	80	63	69	70
St. Joseph.....	30.13	30.54	18	29.48	24	9.8	31	nw.	26	84	64	72	64
St. Louis.....	30.11	30.50	18	29.36	3	11.8	39	nw.	4	79	67	69	49
Springfield.....	30.07	30.55	18	29.41	3	10.8	34	w.	26	78	66	67	63
Cairo, Ill.....	30.12	30.51	18	29.40	3	9.4	30	s.	24	76	67	70	49
Keokuk, Iowa..	30.17	30.54	18	29.52	3	9.4	27	w.	26	81	60	69	74

## COMPARATIVE DATA FOR FEBRUARY

Year	Temperature			Precipitation					Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy
1888.....	33.0	73	-17	2.22	2.04	2.22	2.39	.....	7	..	..	..
1889.....	29.3	73	-9	2.74	1.80	3.12	3.30	.....	7	..	..	..
1890.....	35.5	81	-8	2.70	1.12	2.01	4.97	.....	7	..	..	..
1891.....	32.7	78	-13	2.44	2.05	2.32	2.96	2.4	6	..	..	..
1892.....	37.7	71	2	4.31	3.47	5.40	4.06	.....	9	7	6	16
1893.....	27.9	65	-20	2.15	2.02	1.43	2.99	4.6	6	10	7	11
1894.....	30.8	72	-12	2.68	2.15	1.96	3.93	11.2	6	10	8	10
1895.....	23.6	77	-26	0.57	0.48	0.56	0.67	3.3	5	10	10	8
1896.....	35.6	81	-10	1.66	1.50	1.19	2.30	4.1	5	12	8	9
1897.....	34.8	74	-15	2.52	1.47	2.81	3.27	8.2	7	7	14	..
1898.....	35.4	78	-9	1.61	1.54	1.47	1.81	9.8	5	13	6	9
1899.....	20.4	72	-32	2.30	1.75	2.06	3.10	5.3	6	12	8	8
1900.....	26.2	70	-16	4.00	3.87	3.35	4.77	16.6	10	10	6	12
1901.....	28.1	76	-19	1.74	1.41	1.51	2.31	7.6	6	13	7	8
1902.....	24.0	72	-17	1.62	0.89	2.10	1.88	5.5	5	11	8	9
1903.....	29.8	74	-25	3.25	1.98	3.34	4.42	5.8	7	11	6	11
1904.....	30.0	82	-18	1.02	0.64	0.63	1.78	1.5	5	11	8	10
1905.....	21.5	69	-40	1.68	1.72	1.69	1.63	13.2	8	11	6	11
1906.....	33.7	73	-13	2.42	2.66	2.17	2.43	4.8	7	15	6	7
1907.....	34.8	77	-15	1.28	0.79	0.92	2.12	4.5	6	12	5	11
1908.....	35.6	78	-7	4.32	2.83	4.20	5.94	4.1	9	13	6	10
1909.....	38.8	71	-4	3.24	2.37	2.52	4.82	3.1	9	13	5	10
1910.....	28.3	72	-24	2.17	0.92	1.89	3.71	10.2	6	13	5	10
1911.....	38.1	87	0	3.78	4.09	3.99	3.27	6.7	8	12	5	11
1912.....	28.3	72	-12	2.51	1.99	2.56	2.98	14.5	6	10	7	12
1913.....	29.8	78	-9	2.15	2.08	2.62	1.75	8.5	7	12	5	11
1914.....	28.3	75	-11	2.80	2.03	2.55	3.83	14.0	7	12	6	10
1915.....	39.4	72	7	3.07	2.48	3.53	3.21	4.1	8	9	5	14
1916.....	31.4	78	-12	0.98	0.79	0.73	1.42	5.0	5	13	6	10
1917.....	30.5	83	-22	0.44	0.16	0.25	0.92	1.4	2	14	7	7
1918.....	34.9	85	-25	1.05	1.26	0.80	1.10	0.6	4	15	6	7
1919.....	35.3	71	-10	1.96	1.98	2.08	1.82	6.4	7	13	4	11
1920.....	34.5	78	-5	0.65	0.33	0.40	1.21	1.2	4	11	6	12
1921.....	40.1	86	-5	1.03	0.55	0.74	1.79	1.8	4	14	6	8
1922.....	35.4	80	-5	1.83	1.37	1.62	2.49	1.9	5	14	6	8
1923.....	30.2	75	-9	1.58	0.52	1.26	2.97	1.4	5	13	5	10
1924.....	33.8	79	-5	1.85	1.59	1.92	2.04	8.1	7	14	4	11
1925.....	38.7	78	1	1.90	1.87	1.42	2.40	1.7	6	12	6	10
1926.....	39.4	76	-4	2.07	1.93	1.81	2.46	2.9	6	11	6	11
1927.....	41.3	78	1	1.07	1.07	0.90	1.25	2.3	5	10	8	10
1928.....	37.0	73	-2	2.28	2.18	2.19	2.47	1.8	7	12	6	11
1929.....	25.0	64	-23	1.96	1.31	1.72	2.86	9.4	7	10	5	13
1930.....	44.5	89	-5	1.74	0.95	1.46	2.80	1.3	4	13	8	7
1931.....	40.9	75	-5	2.49	1.45	2.83	3.20	0.3	6	12	6	10
1932.....	42.4	83	-3	1.47	1.00	1.00	2.41	2.0	6	12	7	10
1933.....	32.2	78	-22	1.47	0.73	1.28	2.39	4.2	5	14	7	7
1934.....	32.5	79	-26	1.33	0.98	1.32	1.70	7.0	5	15	6	7
1935.....	37.4	80	0	1.54	1.63	1.45	1.55	0.2	5	10	6	12
1936.....	23.2	78	-25	1.50	1.43	1.33	1.73	4.1	6	12	7	10
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Period.....	32.9	89	-40	2.06	1.62	1.93	2.64	5.1	6	12	6	10



## Climatological Data for February 1936

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches				Number of days				Prevailing direction of wind	Observers	
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelted	With precip., .01 inch or more	Clear	Partly cloudy			Cloudy
Northern Division																				
Bethany	Harrison	916	41	13.0	-14.5	65	24	-25	5	40	0.45	-0.97	0.20	4.5	4	10	14	5	ne.	A. S. Cumming
Brunswick	Chariton	652	55	19.4	-10.4	71	24	-16	18	40	3.76	+1.95	3.38	8.0	9	14	3	12	ne.	O. K. Bencke
Chillicothe	Livingston	779	27	13.4	-18.6	72	24	-21	5	52	1.11	-0.34	0.59	7.5	5	13	7	9	nw.	Win. J. Olenhouse
Clifton Hill	Randolph	731	37	18.4	-11.8	71	25	-18	5	38	3.85	+2.11	3.55	5.0	7	9	13	7	ne.	Dr. A. J. Bradsher
Columbia	Boone	784	46	21.4	-10.4	74	24	-10	18	87	1.40	-0.69	1.23	2.7	8	12	8	9	w.	U. S. Weather Bureau
Conception	Nodaway	980	47	11.4	-16.8	55	24†	-19	9	41	1.03	-0.12	0.50	9.3	6	3	18	8	nw.	Fr. Adelhelm Hess
Downing	Schuyler	876	15	14.4	-17.9	67	24	-19	5	38	0.93	-0.45	0.55	4.2	5	8	13	8	w.	James Taylor
Edgerton	Platte	856	16	17.4	-16.9	73	21	-22	5	42	0.54	-0.80	0.28	3.4	8	15	3	11	n.	Fred L. Stiff
Elsherry	Lincoln	449	5	21.0	.....	73	24	-14	5	37	1.27	.....	0.87	2.0	7	11	6	12	ne.	Ray E. Mills
Fayette	Howard	680	56	20.1	-10.5	68	24	-18	5	41	1.61	-0.09	1.40	3.2	4	8	14	7	n.	Harry P. Mason
Fulton	Callaway	818	48	19.2	-13.9	74	24	-17	5	49	1.01	-0.66	0.69	1.5	6	14	3	12	n.	Clyde C. Herring
Gorin	Scotland	700	49	.....	.....	.....	.....	.....	.....	.....	1.80	+0.40	1.06	11.0	5	15	11	3	ne.	W. L. Harker
Grant City	Worth	1,134	32	10.6	-18.0	56	24	-22	5	35	0.43	-0.68	0.21	5.5	4	5	10	14	se.	Howard Rybolt
Hannibal	Marion	759	44	18.8	-10.9	72	24	-14	18	39	1.95	+0.09	1.61	5.1	7	10	7	12	nw.	Hannibal Water Dept.
Kansas City	Jackson	963	47	19.6	-11.6	71	24	-7	8	45	0.55	-1.27	0.23	5.7	8	8	9	12	ne.	U. S. Weather Bureau
Kidder	Caldwell	1,020	44	11.1	-17.3	70	24	-15	5	48	0.26	-1.28	0.15	4.0	3	12	6	11	ne.	Roscoe L. Terry
King City	Gentry	1,095	10	.....	.....	.....	.....	.....	.....	.....	0.43	-1.07	0.13	5.1	6	4	12	13	nw.	John M. Martin
Kirkville	Adair	969	47	15.5	-11.6	69	24	-18	5	37	1.41	-0.12	0.90	7.2	5	12	7	10	ne.	Prof. J. S. Stokes
Linneus	Linn	816	4	.....	.....	.....	.....	.....	.....	.....	1.12	.....	0.51	7.0	5	17	4	8	nw.	J. Robert Hall
Louisiana	Pike	469	42	19.2	-11.7	73	24	-16	5	37	0.95	-1.13	0.90	1.0	2	19	3	7	w.	Stark Bro's Nurseries
Macon	Macon	875	37	14.6	-15.0	71	24	-17	5	46	2.07	+0.37	1.62	5.7	4	14	13	2	ne.	W. C. Brown
Maryville	Nodaway	1,169	46	11.0	-14.8	57	24	-20	9	33	0.61	-0.82	0.27	6.4	8	11	4	14	nw.	R. B. Montgomery
Mexico	Audrain	800	47	17.6	-12.5	73	24	-13	18	50	1.07	-0.78	0.85	3.7	6	16	1	12	nw.	Mrs. Abbie Snoddy
Monroe City	Monroe	748	15	.....	.....	.....	.....	.....	.....	.....	1.93	+0.52	1.84	0.7	3	15	7	7	s.	J. S. Conway
Oregon	Holt	1,048	80	14.6	-14.2	63	24	-14	41	39	0.45	-0.92	0.20	5.0	5	12	11	6	ne.	Miss Mina Wright
St. Charles	St. Charles	520	48	22.3	-11.0	74	24	-9	18	41	1.53	-0.46	0.67	1.5	5	17	4	8	nw.	Martin L. Comann
St. Joseph	Buchanan	967	26	15.6	-16.8	69	24	-11	9	42	0.44	-0.90	0.17	4.5	7	10	9	10	nw.	U. S. Weather Bureau
Shelbina	Shelby	779	43	.....	.....	.....	.....	.....	.....	.....	3.89	+2.05	.....	2.5	3	.....	.....	.....	.....	J. C. Jewett
Steffensville	Lewis	650	38	17.6	-12.1	70	24	-18	5	38	2.80	+1.03	2.50	3.0	7	13	10	6	n.	Frank Hall
Tarkio	Achison	916	33	10.8	-18.2	52	28	-22	5	34	0.46	-0.82	0.20	11.0	4	10	11	8	nw.	Albert Volker
Trenton	Grundy	822	40	15.2	-14.2	71	24	-20	5	38	0.56	-1.02	0.24	5.5	4	11	11	7	n.	W. H. Estes
Unionville	Putnam	1,062	43	9.6	-17.1	67	24	-16	9†	44	0.77	-1.00	0.50	7.3	3	10	0	19	s.	John H. Schick
Warrenton	Warren	816	54	23.0	-7.9	74	24	-11	5	34	1.52	-0.37	1.07	2.0	5	8	14	7	nw.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.	614	65	15.9	-12.5	71	24	-13	18	43	1.89	+0.29	1.26	5.5	12	8	7	14	w.	U. S. Weather Bureau
Division means and extremes				16.8	-13.9	74	24	-25	5	52	1.43	-0.19	4.00	4.9	6	11	8	10	nw.	
Southwestern Division																				
Appleton City	St. Clair	853	41	24.4	-9.5	69	24	-8	18	42	1.36	-0.31	1.11	0.8	8	9	14	6	ne.	W. G. Bigelow
Buffalo	Dallas	1,200	6	.....	.....	.....	.....	.....	.....	.....	0.94	.....	0.67	2.0	5	17	3	9	.....	C. M. McCallister
Caplinger Mills	Cedar	750	10	.....	.....	.....	.....	.....	.....	.....	0.62	-0.69	0.34	2.2	4	17	0	12	n.	Ozark Utilities Co.
Clinton	Henry	765	43	23.4	-10.2	70	23	-9	18	42	2.08	+0.13	1.60	2.0	6	14	11	4	ne.	A. E. Derwent, M. D.
Concordia	Lafayette	784	21	.....	.....	.....	.....	.....	.....	.....	2.39	+0.69	2.11	3.8	5	15	3	11	ne.	Mrs. W. H. Stratman
Dean II	McDonald	1,000	32	28.8	-6.9	75	24	-9	18	43	1.36	-0.42	0.92	1.4	5	12	6	11	w.	H. E. Dean
Eldon	Miller	934	41	21.0	-12.1	74	24	-9	1	53	0.78	-1.04	0.46	2.5	6	12	12	5	ne.	E. H. Shepherd
Garber	Taney	950	1	30.0	.....	78	24	-14	18	56	0.75	.....	0.62	1.5	3	7	8	14	e.	William H. Durham
Halley	Barry	1,350	11	.....	.....	.....	.....	.....	.....	.....	0.86	-0.94	0.76	0	2	7	7	15	se.	A. W. Madison
Harrisonville	Cass	904	58	16.6	-14.1	75	24	-10	18†	49	1.74	+0.01	1.62	1.5	2	6	12	11	nw.	John H. Patterson
Jefferson City	Cole	557	46	20.8	-11.3	74	24	-8	18†	51	0.88	-0.88	0.55	2.0	5	5	12	12	e.	Mrs. Frank Klegel
Lamar	Barton	980	48	25.4	-9.9	77	24	-11	18	46	0.70	-1.07	0.55	2.2	3	18	1	10	nw.	Jesse A. Mann
Lamonte	Pettis	867	35	22.2	-11.0	70	24	-12	5	41	2.32	+0.47	1.67	2.2	7	10	9	10	nw.	J. E. Wheeler
Lebanon	Laclede	1,265	48	24.2	-10.2	75	23†	-11	18	50	1.09	-1.10	0.74	1.2	4	14	9	6	e.	Mrs. Lou Mulcare
Lexington	Lafayette	688	51	17.4	-13.6	73	24	-9	15	46	1.86	+0.02	1.23	8.2	10	18	8	3	n.	Miss Carrie Loomis
Lockwood	Dade	1,078	30	28.2	-8.8	73	24	-10	18	37	1.17	-0.56	0.78	2.8	6	18	1	10	se.	Hubert A. Nieman
Marshall	Saline	779	49	20.0	-10.9	68	24†	-11	18	39	1.39	+1.41	2.83	5.0	6	18	5	6	sw.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	35	28.0	-7.1	74	24	-10	18	33	1.06	-1.17	0.50	7.5	5	10	10	9	n.	Mo. Fruit Exp. Sta.
Neosho	Newton	1,011	49	29.6	-8.0	72	24†	-11	18	46	1.07	-0.92	0.60	0.8	5	17	4	8	nw.	U. S. Fisheries Sta.
Nevada	Vernon	862	43	26.2	-7.7	71	24	-8	18	44	0.70	-1.05	0.70	0	1	16	2	11	ne.	George A. Kaupp
Sellman	Barry	1,542	35	29.8	-7.7	73	24†	-11	18	42	1.25	-0.59	0.70	1.5	6	15	2	11	w.	Floyd E. Fawver
Seymour (near)	Webster	1,642	30	26.0	-9.0	73	24	-9	18	36	1.49	-0.69	1.10	3.7	3	13	5	11	se.	A. L. Halley
Springfield	Greene	1,324	48	27.6	-7.6	74	24	-8	18	29	1.01	-1.42	0.64	2.3	8	15	5	9	se.	U. S. Weather Bureau
Versailles	Morgan	1,037	4	24.1	.....	75	24	-10	18	41	1.02	-0.55	0.71	0.7	8	11	8	10	ne.	I. M. Wilson
Warrensburg	Johnson	878	49	21.8	-10.7	72	24	-11	5	42	1.42	-0.46	1.20	2.4	8	15	6	8	ne.	E. A. Markey
Warsaw	Benton	687	35	25.8	-9.8	76	24	-9	18	40	1.28	-0.96	0.87	1.5	8	9	8	12	n	Everett Martin
Division means and extremes				24.8	-9.8	78	24	-14	18	56	1.33	-0.60	3.60	2.4	6	13	7	9	ne.	
Southeastern Division																				
Arcadia	Iron	926	55	25.6	-8.5	73	24	-13	18†	45	1.45	-1.03	0.51	3.1	9	16	5	8	s.	Arcadia College
Birch Tree (near)	Shannon	1,000	41	29.0	-7.3	75	24	-10	18	37	1.61	-0.89	0.60	7.0	8	15	1	13	n.	V. H.H



## Daily Precipitation for February 1936

Stations	Drainage-basins	Day of month																												Total			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28		29	...	...
Northern Division																																	
Amity	Grand	T.	T.	.20				T.	.11					.03	.01		T.	T.	.08														0.47
Bethany	do			.20					.10			T.		T.	.09	.04		T.	.10				.05	.04					T.				0.45
Bowling Green	Mississippi			.01	.05									T.	.02				.03	.06				.02									1.25
Brunswick	Grand			.04	.07				.13	T.				T.	.10				.03	.06				.02									3.76
Canton	Mississippi			.05	.08				.11	.08				T.	.01				.07					.04									1.99
Chillicothe	Grand		T.	T.	.21			T.	.14					T.	.01			T.	T.	.07				.10									1.11
Clifton Hill	Chariton	.02		.03	.02				.10					T.	.07			T.	.12														3.85
Columbia	Missouri	.03	T.	.05	T.				.02			T.	.02	T.	.01			T.	.04				T.										1.40
Conception	do			.18	.32				.28					T.	.07			T.	.09														1.03
Downing	Mississippi			.05					.18					T.	.05				.10				T.	.09									0.93
Edgerton	Missouri	.02	T.	.28					.04					T.	.03			.01		.06													0.54
Edina	Mississippi			T.	.14				.30					T.	.03				.06				T.	.10									1.74
Elberry	do	T.	.02	.08	T.		.01		T.					.16				.13		.06													1.27
Farber	do			T.										T.	.10			.05		.10													1.05
Fayette	Missouri	T.		T.					.06					T.	.08			.05		.05			.10										1.61
Fulton	do		.09		.05				.05			T.		T.	.08			.05		.05													1.01
Gallatin	Grand			T.	.19				.18					T.	.08			.05		.05													0.47
Garin	Mississippi				.10			T.	.50					T.	T.			T.	.12				.05										1.80
Grant City	Grand			.14	.04				.21			T.	T.	T.	T.			T.	.04				.02										0.43
Hamblin	Mississippi	.04		.11	.04			T.	.03				T.	T.	T.			T.	.10														1.95
Hermann	Missouri		.01		.16				T.			T.	T.	.15	T.			.01		.01			T.	.02									1.22
Kahoka	Mississippi			T.	.10			T.	.30					T.	.08			T.	.07														1.60
Kansas City	Missouri	.03	.01	.05					.23					T.	.02	T.		T.	T.														0.55
Kidder	Grand			T.	.15				.05					T.	.01				.13				.06										0.26
King City	Missouri	T.	T.		.11				.07					.03	.01				.09				.08										0.43
Kirksville	Mississippi			.08	.08				.26									.13		.09													1.41
LaBelle	do				.14				.26					.09				.09		.04													1.55
Linneus	Grand		T.		.26			T.	.27					T.				T.	.07					.02									2.10
Louisiana	Mississippi			T.	.11				.12	T.				T.				.05		.07													1.12
Lucerne	Grand			.05	T.				.20					T.				.01		.01													0.95
Macon	Chariton			.05	T.				.27					T.				.10		.20													0.25
Madison	Mississippi			.10				.05	.20					T.	.05			.05		.04													2.07
Maryville	Missouri			.14	.05				.27				.02	.02	.02			.10		.04													2.60
Memphis	Mississippi			.10				T.	.16	.20				T.	.05			.05		.04													0.61
Mexico	do		.01	.07					.05		.05			T.	.05			T.	.04														1.23
Mifflin	Grand		.02	.03	.50				.20	.03				T.				.15															1.07
Monroe City	Mississippi								.08					T.	.05			.15															1.03
New London	do		.05						.10					T.	.09			.01		.12													1.84
Oregon	Missouri	T.		.10	.05				.20				T.	T.	T.			.05		.12				.14									1.70
Palmyra	Mississippi			.08					.06					T.	.04	.05		.05		.08			.05										0.45
Paris	do			.09					.06					T.	.05			.05															1.81
Perry	do			.02	.03				.10					T.	.04			.10		.02													1.70
Philadelphia	do			.18					.10					.09				.02		.08													1.97
St. Charles	Missouri		.03	.12	.28	T.			.17					.52			T.	.03	T.														4.00
St. Joseph	do	T.	.02	.12					.17					.02	T.		T.	.04	T.														1.53
Shelburn	Mississippi			.02					.20					T.				.04	T.				.06										0.41
Shelbyville	do			.03	.04				.07					.08				.07															3.89
Steffensville	do	T.		.18					.20					.08				.05															1.85
Tarkio	Missouri			.03	.04				.07					.08				.07															2.50
Trenton	Grand			.18					.20					.08				.05															0.46
Troy	Mississippi		.01	.01	.10			.01	.24					T.	.15			.08	T.	.03			.04										0.56
Unionville	Chariton			.01	.10				.50					T.	.25	T.		T.	.10														1.13
Warrenton	Mississippi	T.	.10	T.	T.		T.		.27			T.	T.	.25	T.			.10															0.77
Waukegan, Ia.	do		T.	.13	.02		.02		.27			.01	.04	.02	T.	T.	.02	.06					.04										1.52
Southwestern Division																																	
Appleton City	Osage	.04	T.	.05	T.				.06				.06	.02	.01		T.	.01															1.36
Boonville	Missouri			.01	.02				.01	T.				T.	.03			T.	.02			T.	.01										1.40
Buffalo	Osage		.13						.01					T.	.06	.03		T.	.05														0.94
Capfucker Mills	do		.10						.05					T.	.10			T.	.08														0.62
Clinton	do		.17						.05					.20				.06		.09													2.08
Concordia	Missouri		T.		.16				.08					.01				.09		.03							</						



## Daily Precipitation for February 1936—Continued from preceding page

Stations	Drainage-basins	Day of month																																Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	..	..		
Southeastern Div.—Concluded																																		
Farmington	St. Francis	.15	.04	T.					T.				T.	.11	.02			.12									.19		.35				0.98	
Fisk	do	.49	T.	.23				.04	T.	.03			T.	.24	T.			.03	.06									.14	1.27			2.53		
Fredericktown	do	.30		.50					T.					.36				.05	.12		.01								.50			1.84		
Goodland	Black	.25	.15	.23										.88				.15	.12										.38			2.04		
Greenville	St. Francis	.35	T.						T.					.16	.11			.13											.19			0.94		
Jackson	Mississippi	.45	.15				.15							.05	.34	T.		.12											1.09			2.35		
Koshkoning	Black	.30	.10	T.										.10	.31	T.	.10	.17											.82			1.90		
Leeper	do	.37	T.	T.				T.		T.				.45	T.	T.		.08	.16													2.40		
Marble Hill	Mississippi	.25	.38											.07	.35			.20											1.15			2.20		
Meramec Park	Meramec	.01	.01	.40										1.40				.02	.04										.33			0.74		
Morehouse	Mississippi	.01	.34	.02	T.		.04	.01	.05					.05				.09			.01								.12			1.95		
New Madrid	do		.40		.04			.15		.15				.36	T.			.15	.10		T.	T.							.60			1.31		
Owensville	Gasconade			.20						T.				.48				.03	T.											.76			1.75	
Parma	St. Francis	.40						.20						.26				.09	.04											.95			1.65	
Poplar Bluff	Black	.40						.05						.15				.10												.44			1.31	
Rolla	Meramec		.10		.19					T.				.56	T.			T.	.10		.02									.12			1.97	
St. Louis	Mississippi	.07	T.	.53					T.					.47	.68	T.		T.	.13			T.						T.	.10			1.96		
St. Louis University*	do	.02		.52					T.					T.	.27	.90	T.		.01			T.						.01	.10			1.10		
Salem	Meramec	.05		.19										.44				.06												.36			1.86	
Sikeston	Mississippi	..	.43					.10						.23				.25			.10									.75			1.64	
Union	Meramec	..	.04	T.	.40	.04				T.				.90				.05	.06											.48	.05		1.73	
Valley Park	do		.04	T.	.40	.04				T.				.90				.07	.06											.13	.09		1.88	
Williamsville	Black		.36		.10					.02				.44	.04			.07	.09		.03									.62		.73	1.88	
Willow Sprgs. (near)	White		.50							.01				.33				.03	.16		.04									.62			1.69	
Calro, Ill.	Mississippi	.68	T.	.06	T.		.16	T.	.05					.25	.01	T.		.06	.12		.03									.59			2.01	

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation.   
 .. Precipitation measured in the morning; amount then recorded is for the preceding 24 hours.   
 T. Trace, or less than 0.01 inch.   
 \*\*\* Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight.   
 .. Precipitation in the next following measurement; separate dates of fall not recorded.   
 \* Precipitation is for 24-hour period, midnight to midnight   
 † Estimated.   
 ‡ Partially estimated.   
 |||| Incomplete.

Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for February 1936  
 (See precipitation data in table on preceding page)

Station	Data	Day of month																															Monthly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	..	..	
Lakeside .....	Evaporation .....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
	Mean temperature ..	12	21	25	11	12	17	24	22	10	12	16	24	28	11	10	10	8	5	12	24	25	28	46	55	48	033	112	067	073	..	..	23.8
	Wind movement ..	43	66	61	100	79	84	47	125	142	68	67	54	54	107	84	74	59	107	67	53	40	46	54	105	77	71	92	31	32	..	..	2,089

Observations taken at 7.30 a. m. Wind movement corrected to true velocities. For description see April 1932 report.

.... Record incomplete; pan frozen 1st to 25th inclusive.

Continued from page 6

### TEMPERATURE

The monthly mean temperature for the State, 70 stations reporting, was 23.2°, or 9.7° below normal. The highest monthly mean was 34.1° at Caruthersville, and the lowest monthly mean was 9.6° at Unionville. The highest temperature recorded was 78° at Garber on the 24th, and the lowest was -25° at Bethany on the 5th. The greatest daily range was 56° at Garber on the 23d.

### PRECIPITATION

The average precipitation for the State, 123 stations reporting, was 1.50 inches, or 0.56 inches less than normal. The greatest local monthly amount was 4.45 inches at Philadelphia, and the least local monthly amount was 0.25 inch at Lucerne. The greatest amount in any twenty-four hours was 4.00 inches at Philadelphia on the 26th. The average number of days with 0.01 inch or more of precipitation was 6. The snowfall for the State averaged 4.1 inches, or 1.0 inch less than normal. The greatest local monthly snowfall was 11.0 inches at Gorin and Tarkio.

### MISCELLANEOUS PHENOMENA

Dust.—24th, 25th, 29th.  
 Floods.—25-28th in Grand River.  
 Fog.—Dense, 3d, 13th, 22d, 25th.  
 Glaze.—1st, 2d, 3d, 4th, 12th, 13th, 14th, 21st.  
 Hail.—Light, 25th at Clifton Hill and Mexico, 26th at St. Charles, Dean, and Warsaw.  
 Halos.—Solar, 6th, 7th, 8th, 11th, 18th, 23d, 26th, 29th; lunar, 4th, 5th, 29th.  
 Sleet.—1st, 2d, 3d, 4th, 8th, 9th, 12th, 13th, 17th.  
 Smoke.—Dense, 13th, 19th, 20th, 21st.  
 Thunderstorms.—Generally, on 25th and 26th.  
 Windstorms—Tornado.—A small tornado occurred on February 26, first striking about 16 miles east of Carthage, Mo., about 3 a. m. It ended near Red Top, Daalls County, about 50 miles northeast of starting point. Damage estimated, approximately \$15,000. No injury to persons reported.

### ERRATA

January 1936, page 2: Departure from normal precipitation for the Northern Division should be +0.13. Average precipitation for the Southwestern Division should be 0.56; departure should be -1.53. Average precipitation for the Southeastern Division should be 0.77; departure should be -2.50.



## Daily Temperatures for February 1936

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	...	...	Mean
Northern Division																																
Brunswick.....	Maximum... 14	17	24	19	14	28	32	35	9	13	17	25	25	26	15	13	10	7	22	36	30	43	62	71	67	52	52	60	56	...	...	30.1
Chillicothe §§.....	Maximum... 9	5	16	7	13	8	1	5	11	9	6	10	17	2	11	1	3	16	15	16	4	9	33	52	86	37	18	29	31	...	...	7.7
Columbia.....	Maximum... 12	17	19	15	11	24	32	4	0	14	11	18	25	15	9	8	3	9	25	35	22	43	61	72	57	44	40	61	46	...	...	26.6
Fayette.....	Maximum... 17	18	31	14	16	27	31	33	13	13	18	32	27	22	14	15	10	8	24	35	27	49	69	74	65	49	38	61	49	...	...	31.4
Grant City.....	Maximum... 12	10	10	3	8	10	3	4	4	7	5	18	22	1	6	2	6	10	5	21	10	16	39	60	39	33	21	31	34	...	...	11.8
Hannibal.....	Maximum... 15	17	29	25	13	29	31	30	12	13	19	31	28	25	14	15	13	9	26	37	30	46	67	68	66	49	42	62	54	...	...	31.6
Kansas City.....	Maximum... 9	9	16	5	18	9	2	3	12	8	5	13	18	0	8	1	2	12	15	14	5	10	31	51	38	37	19	26	33	...	...	8.6
Kidder §§.....	Maximum... 7	11	12	9	7	25	23	23	7	2	7	11	17	17	4	4	0	3	9	14	15	37	46	56	46	36	34	50	50	...	...	20.1
Louisiana.....	Maximum... 19	20	29	27	11	22	28	33	8	8	14	31	27	28	12	11	9	5	19	34	28	37	60	72	65	47	39	57	50	...	...	1.2
Macon §§.....	Maximum... 7	2	15	2	13	3	2	6	9	10	4	10	22	0	8	0	2	14	6	11	7	9	30	52	36	38	17	26	29	...	...	29.3
Maryville.....	Maximum... 13	16	22	18	19	28	36	34	11	18	15	17	21	7	10	8	5	11	24	34	21	58	65	74	50	51	45	64	47	...	...	8.2
Mexico §§.....	Maximum... 10	7	4	5	6	14	6	7	5	4	5	10	7	4	6	3	3	6	3	16	8	13	46	49	37	31	21	34	32	...	...	29.0
Oregon.....	Maximum... 10	16	18	12	12	33	30	6	2	8	11	15	20	1	6	5	1	6	20	29	19	41	58	70	47	41	39	60	44	...	...	10.3
St. Joseph.....	Maximum... 14	15	19	17	10	20	25	30	5	9	10	19	27	27	6	9	8	6	18	34	34	37	57	69	66	43	40	55	51	...	...	0.3
Trenton.....	Maximum... 5	4	10	7	18	3	7	7	14	12	6	3	2	4	11	4	4	5	14	10	6	5	28	48	32	35	14	23	24	...	...	26.9
Unionville §§.....	Maximum... 16	20	30	28	10	21	30	33	10	10	18	32	28	22	15	18	7	5	20	33	25	37	60	73	55	46	36	50	43	...	...	4.1
Warrenton.....	Maximum... 9	11	18	1	16	4	7	2	9	7	2	10	25	9	4	3	1	10	15	4	10	10	32	54	40	39	20	25	32	...	...	9.7
Appleton City.....	Maximum... 13	18	24	11	10	21	30	3	6	9	16	23	26	8	9	12	3	6	21	35	22	50	65	71	51	45	36	60	46	...	...	25.9
Clinton.....	Maximum... 9	9	16	5	17	9	2	3	12	8	5	13	18	0	8	1	2	12	15	14	15	10	31	51	38	37	19	26	33	...	...	3.2
Eldon §§.....	Maximum... 4	0	7	17	18	5	0	12	20	16	5	1	8	15	11	10	8	15	15	7	1	6	31	38	31	27	9	26	22	...	...	20.1
Garber.....	Maximum... 16	20	30	15	14	25	32	33	15	14	18	32	28	12	15	15	9	25	36	28	43	66	73	47	49	40	62	46	...	...	30.1	
Harrisonville §§.....	Maximum... 9	10	9	4	12	11	3	3	7	10	9	2	14	5	8	8	2	13	11	8	7	6	16	73	47	49	40	60	55	...	...	5.0
Jefferson City §§.....	Maximum... 9	12	14	13	14	27	29	25	5	11	10	10	18	14	7	5	1	8	20	22	20	47	58	63	57	40	40	60	55	...	...	24.6
Lamar §§.....	Maximum... 1	2	7	14	9	6	4	12	12	11	11	4	8	14	12	8	8	13	8	12	2	8	40	44	31	30	14	31	25	...	...	4.7
Lebanon §§.....	Maximum... 10	14	16	13	14	28	32	32	5	12	13	19	2	8	8	1	8	19	23	20	47	62	69	48	42	42	61	46	...	...	25.1	
Lexington §§.....	Maximum... 3	3	2	10	10	9	4	10	11	8	1	7	2	10	9	6	6	10	8	8	6	11	41	43	34	25	16	31	26	...	...	6.0
Marshall.....	Maximum... 12	14	15	14	9	24	28	29	0	6	12	16	25	22	2	7	5	4	21	30	26	40	57	71	64	46	36	58	50	...	...	25.6
Mountain Grove.....	Maximum... 6	0	12	9	20	6	2	8	15	11	10	7	12	6	11	6	4	12	17	6	5	7	32	49	33	34	14	26	25	...	...	4.9
Neosho.....	Maximum... 11	4	3	8	15	15	7	7	16	16	12	8	3	4	15	6	6	14	13	10	4	5	10	35	32	32	12	12	23	...	...	20.0
Warrenton.....	Maximum... 19	19	32	32	14	29	30	34	18	14	21	35	33	30	17	18	17	8	23	34	34	42	60	74	73	48	48	60	59	...	...	33.8
Appleton City.....	Maximum... 11	12	17	1	11	5	2	6	8	8	1	12	30	7	5	3	2	10	3	16	12	17	32	54	42	36	21	27	35	...	...	12.2
Clinton.....	Maximum... 19	19	32	20	28	33	39	37	19	24	29	35	27	23	14	15	14	14	25	41	35	58	66	69	67	53	47	63	56	...	...	35.2
Eldon §§.....	Maximum... 15	11	19	4	2	19	12	2	3	2	8	9	18	1	3	1	1	8	5	20	13	16	36	53	40	37	25	31	34	...	...	13.7
Garber.....	Maximum... 19	20	30	20	22	30	40	35	15	24	24	34	24	18	11	12	12	13	25	42	33	57	70	64	64	51	48	65	58	...	...	33.8
Harrisonville §§.....	Maximum... 10	10	12	5	7	15	10	2	3	3	6	17	17	3	4	0	0	9	9	22	12	15	34	56	40	38	33	28	33	...	...	13.1
Jefferson City §§.....	Maximum... 22	24	33	15	21	31	38	35	15	21	27	39	30	6	15	17	8	10	23	38	26	55	71	74	48	52	45	65	54	...	...	33.0
Lamar §§.....	Maximum... 9	12	12	2	7	7	7	5	3	3	3	5	24	6	3	3	4	8	8	1	15	14	18	35	47	49	42	24	23	...	...	8.9
Lebanon §§.....	Maximum... 32	32	36	35	28	34	42	36	30	28	39	37	33	33	28	27	21	19	21	49	47	61	70	78	74	71	51	68	72	...	...	42.7
Lexington §§.....	Maximum... 19	23	27	2	1	18	7	7	1	4	6	23	30	9	10	14	4	14	8	18	15	16	14	58	55	45	29	24	30	...	...	17.3
Marshall.....	Maximum... 14	22	22	16	21	27	35	0	10	13	16	18	22	2	9	9	3	10	24	33	21	58	65	75	50	52	45	65	48	...	...	27.8
Mountain Grove.....	Maximum... 3	3	8	8	8	6	7	8	6	3	6	14	14	5	8	8	2	10	10	2	8	9	19	39	35	34	21	22	31	...	...	5.5
Neosho.....	Maximum... 20	22	32	15	15	29	33	33	19	17	22	38	31	14	16	18	8	9	25	36	31	53	70	74	49	50	41	63	52	...	...	32.2
Springfield.....	Maximum... 8	13	13	1	5	5	5	5	3	4	4	6	18	8	3	3	4	8	8	3	14	14	19	42	44	38	22	27	...	...	9.5	





## CLIMATOLOGICAL DATA

19

## MISSOURI SECTION

ROSCOE NUNN  
ST. LOUIS, MO.

VOL. XL

MARCH 1936

No. 3

PRICE: 5 CENTS A COPY; 50 CENTS A YEAR

## GENERAL SUMMARY

From a February average temperature of 23.2° (the third coldest of record) to a March average of 49.4° (the second mildest in the last fifteen years) is the brief story of what happened in Missouri during February-March 1936. This March was not quite as mild as March 1935, by one degree, but March 1935 followed an unusually mild February. The normal difference in average temperature between February and March is 10.9°, but in 1936 the difference was 26.2°. March 1936, although having no extremely high temperatures, was mild almost continuously, from the beginning to the 29th, with only a few days of subnormal temperature. The last two days of the month, however, were quite cold.

Precipitation was very light in all parts of the State, except a small area in the Southeastern Division, consisting principally of the counties of Scott, Dunklin, New Madrid, and Mississippi, and even these reported considerably less than normal. The average precipitation for the month was less than 0.50 inch in the northwestern quarter, and less than 1.00 inch for the western half of the State, while for the State as a whole it was only 1.27 inches, or a little more than one-third the March normal.

It was the fourth consecutive month of light precipitation. The total for the four-month period, December-March, inclusive, was only about one-half the normal, the actual amount received being 4.91 inches, whereas, the normal amount is 9.68 inches. The deficiency was fairly uniform over the State.

Although the situation was becoming serious, there was no great immediate need for moisture at the close of the month except in a number of southwestern counties, embracing the Springfield area. In fact, the mild, dry March was unusually favorable for field work, and good progress was made in plowing, etc. Oat sowing was nearly finished and early potatoes were being planted. Wheat was generally in good condition in the northern half of the State, but only fair in most of the southern half. Other grains and pastures were generally rather short.

The month was unusually windy, but not much damage from storms was reported except on the 23d, when a tornado (described in another place) occurred in Webster, Laclede, and Camden counties.

Stages of the principal rivers were considerably above normal, but no floods occurred in Missouri except in the Mississippi River at New Madrid and below during the last few days of the month, due to the big flood in the Ohio River.

## TEMPERATURE

The monthly mean temperature for the State, 70 stations reporting, was 49.4°, or 5.6° above normal. The highest monthly mean was 56.0° at Caruthersville, and the lowest monthly mean was 41.5° at Unionville. The highest temperature recorded was 84° at Caruthersville on the 26th, and the lowest was 13° at Downing on the 6th. The greatest daily range was 54° at Seymour on the 6th.

## PRECIPITATION

The average precipitation for the State, 123 stations reporting, was 1.27 inches, or 1.99 inches less than normal. The greatest local monthly amount was 4.05 inches at New Madrid, and

the least local monthly amount was only a trace at Tarkio. The greatest amount in any twenty-four hours was 1.79 inches at Mountain Grove on the 22-23d. The average number of days with 0.01 inch or more of precipitation was 5. The snowfall for the State averaged only a trace, or 3.1 inches less than normal. The greatest local monthly snowfall was only a trace at several stations in each division of the State.

(Continued on page 14)

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind				Relative humidty			Percentage of sunshine
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	7 a. m.	12 noon	7 p. m.	
Columbia.....	29.91	30.29	5	29.44	26	10.4	32	w.	12	71	46	47	65
Kansas City.....	29.89	30.30	5	29.31	22	12.3	38	w.	26	69	37	41	83
St. Joseph.....	29.88	30.30	5	29.27	22	11.2	34	nw.	11	67	38	41	81
St. Louis.....	29.90	30.32	6	29.46	26	13.6	47	sw.	22	68	49	50	76
Springfield.....	29.89	30.25	5	29.48	23	11.9	32	s.	23	68	45	45	71
Cairo, Ill.....	29.91	30.29	6	29.54	26	10.9	33	s.	24	77	53	58	68
Keokuk, Iowa..	29.92	30.88	5	29.40	26	9.8	38	nw.	12	71	43	47	67

## COMPARATIVE DATA FOR MARCH

Year	Temperature			Precipitation					Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy
1888.....	38.5	90	1	3.90	4.13	4.37	3.19	....	10	..	..	..
1889.....	44.3	84	13	2.22	1.26	3.37	2.02	5.7	5	..	..	..
1890.....	37.3	79	-11	3.49	2.00	2.43	6.05	5.7	8	..	..	..
1891.....	36.6	78	-11	2.66	3.03	2.34	2.62	7.1	10	..	..	..
1892.....	38.9	87	5	2.96	3.31	3.46	2.12	..	8	..	..	..
1893.....	40.5	86	0	2.95	2.49	2.71	3.64	3.2	7	11	10	13
1894.....	47.7	89	2	3.21	2.29	2.88	4.45	0.2	6	15	9	10
1895.....	42.4	98	0	2.36	1.49	2.38	3.21	4.4	9	14	7	10
1896.....	39.2	82	2	2.22	1.15	2.03	3.47	5.2	8	11	9	11
1897.....	44.2	82	-5	6.71	4.38	5.58	10.18	1.0	12	9	9	13
1898.....	44.7	83	9	7.44	5.26	6.42	10.63	0.6	11	11	7	13
1899.....	37.4	78	-8	2.92	3.19	2.34	3.23	8.9	10	9	11	11
1900.....	40.4	88	-4	1.52	1.43	1.85	1.79	0.2	6	15	9	7
1901.....	42.7	85	-1	3.77	3.33	4.21	3.77	1.8	8	11	8	12
1902.....	45.3	85	1	3.71	2.50	4.64	3.99	0.8	9	10	10	11
1903.....	46.8	81	9	3.62	2.34	4.17	4.94	1.1	8	13	7	11
1904.....	44.8	87	8	4.55	3.54	3.13	6.98	1.2	9	11	9	11
1905.....	50.3	88	10	3.15	2.27	3.36	3.83	T.	8	11	8	12
1906.....	34.6	75	-5	3.98	2.63	3.12	6.18	8.6	11	6	7	18
1907.....	53.9	95	16	2.76	2.54	3.05	2.70	1.0	7	14	7	10
1908.....	50.1	89	14	2.98	1.38	3.33	4.22	1.0	7	14	7	10
1909.....	44.5	81	9	3.03	2.24	2.01	4.83	0.6	6	13	9	9
1910.....	55.8	96	15	0.77	0.26	1.00	1.05	0.1	2	20	7	4
1911.....	46.8	91	5	1.72	1.71	1.84	1.62	1.4	6	16	8	7
1912.....	35.2	89	-4	4.69	3.69	5.25	5.12	16.5	11	12	6	13
1913.....	40.6	84	-12	4.64	3.44	4.52	5.95	5.0	9	12	8	11
1914.....	43.2	87	-2	2.76	2.80	2.89	2.59	4.7	8	13	7	11
1915.....	36.4	70	6	1.45	1.20	2.01	1.15	7.9	6	7	8	16
1916.....	47.0	95	-2	2.53	2.42	3.20	1.98	3.1	7	14	8	9
1917.....	45.2	86	-7	2.68	2.68	2.80	2.56	1.5	7	15	7	9
1918.....	50.9	95	8	1.03	0.45	1.56	1.09	0.1	4	18	6	7
1919.....	46.3	90	-2	2.43	2.27	1.44	3.59	0.7	6	15	8	8
1920.....	44.6	86	-6	5.18	4.60	5.38	5.56	1.4	8	15	6	10
1921.....	51.9	90	11	5.06	3.52	5.32	6.84	0.5	10	13	9	9
1922.....	45.6	80	3	6.39	4.89	6.78	7.51	2.2	12	11	6	14
1923.....	40.4	83	-11	4.23	3.53	3.64	5.52	2.3	8	14	6	11
1924.....	38.4	80	8	2.54	2.52	2.40	2.69	0.4	8	8	8	15
1925.....	47.7	86	-5	1.95	1.76	1.98	2.10	0.8	5	17	8	6
1926.....	39.6	83	8	2.87	2.15	2.82	3.63	7.0	8	13	6	12
1927.....	45.9	80	0	5.94	4.08	6.90	6.88	3.7	11	12	8	11
1928.....	46.3	89	10	1.60	1.00	1.55	2.24	2.4	5	15	9	7
1929.....	48.6	97	11	3.33	2.99	3.12	3.88	T.	8	12	8	11
1930.....	43.2	80	6	1.38	1.19	0.91	2.04	1.4	4	15	6	7
1931.....	39.5	70	10	3.17	2.55	3.07	3.88	8.8	8	11	7	13
1932.....	38.3	81	-2	1.97	1.39	1.60	2.98	2.8	7	12	9	10
1933.....	44.1	87	5	3.66	3.04	2.81	5.13	2.0	10	11	8	12
1934.....	41.2	82	-3	2.55	1.62	2.10	4.03	4.9	7	13	8	10
1935.....	50.4	87	8	5.76	2.46	5.10	9.78	0.7	9	10	10	11
1936.....	49.4	84	13	1.27	0.82	1.00	1.98	T.	5	16	9	6
Period.....	43.8	98	-12	3.26	2.51	3.18	4.08	3.1	8	18	8	10



## Climatological Data for March 1936

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observers	
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelting	With precip., .01 inch or more	Clear	Partly cloudy			Cloudy
Northern Division																				
Bethany	Harrison	916	41	45.6	+ 5.3	77	23	18	31	42	0.30	-1.93	0.30	0	1	15	15	1	sw.	A. S. Cumming
Brunswick	Chariton	652	55	50.1	+ 8.2	78	28	21	6†	40	0.55	-2.15	0.45	0	2	19	4	8	se.	O. K. Benecke
Chillicothe	Livingston	779	27	46.2	+ 5.1	76	23†	17	31	49	0.39	-2.09	0.29	0	2	24	5	2	nw.	Wm. J. Olenhouse
Clifton Hill	Randolph	731	37	48.4	+ 6.2	76	10	19	6	37	0.86	-1.88	0.63	0	6	13	12	6	n.	Dr. A. J. Bradsher
Columbia	Boone	784	46	48.2	+ 5.6	78	23	21	6	36	2.20	-0.74	1.63	T	6	14	10	7	w.	U. S. Weather Bureau
Conception	Nodaway	980	47	45.7	+ 5.9	78	23	15	31	42	0.38	-1.27	0.38	0	2	8	21	2	nw.	Fr. Adelhelm Hess
Downing	Schuyler	876	15	44.2	+ 2.6	77	23	13	6	38	0.75	-1.41	0.41	0	4	17	8	6	w.	James Taylor
Edgerton	Platte	856	16	47.5	+ 4.3	78	23	18	31	43	0.16	-2.10	0.16	T	1	26	0	5	s.	Fred L. Stiff
Elberry	Lincoln	449	5	47.1	.....	80	23	19	6	39	1.22	.....	0.95	0	5	11	16	4	nw.	Ray E. Mills
Fayette	Howard	680	56	48.2	+ 6.3	75	28	20	6	41	1.59	-1.23	0.91	0	2	11	18	2	nw.	Harry P. Mason
Fulton	Callaway	818	48	47.6	+ 3.5	79	23	20	6	43	0.85	-2.11	0.35	0	4	16	6	9	nw.	Clyde C. Herring
Gorin	Scotland	700	49	.....	.....	75	23	.....	.....	0.87	.....	-1.35	0.42	T	4	12	16	3	se.	W. L. Harker
Grant City	Worth	1,134	32	43.6	+ 2.3	75	23	16	31	46	0.32	-1.69	0.32	T	1	4	21	6	sw.	Howard Kybolt
Hannibal	Marion	759	44	46.5	+ 5.5	79	23	17	6	33	0.83	-1.77	0.52	0	6	10	8	13	se.	Hannibal Water Dept.
Kansas City	Jackson	963	47	48.9	+ 6.2	79	23	20	31	40	0.08	-2.45	0.05	T	2	10	14	7	sw.	U. S. Weather Bureau
Kidder	Caldwell	1,020	44	43.6	+ 2.8	78	23	15	31	51	0.21	-1.98	0.21	0	1	17	11	3	s.	Roscoe L. Terry
King City	Gentry	1,095	10	.....	.....	75	23	.....	.....	0.26	.....	-1.80	0.26	0	1	8	17	6	nw.	John M. Martin
Kirksville	Adair	969	47	45.6	+ 5.9	75	23	15	6	41	0.71	-2.23	0.42	0	3	14	8	9	s.	Prof. J. S. Stokes
Linneus	Linn	816	4	.....	.....	80	23	.....	.....	0.65	.....	.....	0.45	0	3	13	14	4	e.	J. Robert Hall
Louisiana	Pike	469	42	45.3	+ 1.8	80	23	18	6	35	1.05	-2.42	0.45	0	4	22	6	3	w.	Stark Bro's Nurseries
Macon	Macon	875	37	44.6	+ 2.4	77	23	16	6	43	0.73	-2.11	0.60	0	3	13	11	7	nw.	W. C. Brown
Maryville	Nodaway	1,169	46	44.6	+ 6.7	76	23	15	31	42	0.15	-1.72	0.15	T	2	13	10	8	nw.	R. B. Montgomery
Mexico	Audrain	800	47	45.4	+ 3.4	80	23	16	6	45	1.69	-1.22	0.97	0	5	23	3	5	w.	Mrs. Abbie Snoddy
Monroe City	Monroe	748	15	.....	.....	.....	.....	.....	.....	1.08	.....	-1.81	0.61	0	4	18	7	6	s.	J. S. Conway
Oregon	Holt	1,048	80	47.0	+ 7.4	79	23	16	31	40	0.14	-1.82	0.14	0	1	21	7	3	nw.	Miss Mina Wright
St. Charles	St. Charles	520	48	48.5	+ 4.0	78	26	22	7	49	1.23	-1.94	0.40	T	6	23	5	3	nw.	Martin L. Comann
St. Joseph	Buchanan	967	26	47.0	+ 4.6	78	23	18	31	37	0.14	-2.07	0.14	0	1	15	11	5	nw.	U. S. Weather Bureau
Shelbina	Shelby	779	43	.....	.....	.....	.....	.....	.....	1.17	.....	-1.62	0.53	0	5	.....	.....	.....	.....	J. C. Jewett
Steffenville	Lewis	650	38	45.8	+ 3.6	78	23	15	6	36	1.07	-1.94	0.52	T	3	15	12	4	n.	Frank Hall
Tarkio	Atchison	916	33	44.6	+ 4.5	80	23	17	31	40	.....	-1.67	.....	0	0	18	10	3	nw.	Albert Volker
Trenton	Grundy	822	40	47.0	+ 5.9	76	23	18	6†	41	0.40	-2.05	0.37	0	2	11	20	0	s.	W. H. Estes
Unionville	Putnam	1,062	43	41.5	+ 2.6	75	23	15	6	48	0.40	-2.10	0.25	0	2	13	7	11	n.	John H. Schick
Warrenton	Warren	816	54	49.6	+ 7.1	75	10†	18	6	43	1.38	-1.80	0.87	T	4	9	16	6	nw.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.	614	65	43.8	+ 4.9	78	23	17	6	32	1.01	-1.37	0.56	T	4	11	8	12	n.	U. S. Weather Bureau
Division means and extremes				46.8	+ 4.8	80	23	18	6	51	0.82	-1.69	1.63	T	3	15	11	5	nw.	
Southwestern Division																				
Appleton City	St. Clair	853	41	50.0	+ 4.9	76	28	23	31	39	0.86	-2.29	0.45	0	4	11	20	0	ne.	W. G. Bigelow
Buffalo	Dallas	1,200	6	.....	.....	.....	.....	.....	.....	0.65	.....	.....	0.33	0	3	24	5	2	.....	C. M. McCallister
Caplinger Mills	Cedar	750	10	.....	.....	.....	.....	.....	.....	0.83	.....	-1.90	0.83	0	1	23	2	6	nw.	Ozark Utilities Co.
Clinton	Henry	765	43	51.4	+ 6.4	76	10	23	31	39	1.29	-2.07	0.62	0	4	8	23	0	se.	A. E. Derwent, M. D.
Concordia	Lafayette	784	21	.....	.....	.....	.....	.....	.....	0.40	.....	-2.15	0.40	0	1	16	7	8	s.	Mrs. W. H. Stratman
Dean	McDonald	1,000	32	50.4	+ 1.6	80	29	21	17	47	1.48	-2.22	0.64	0	4	17	10	4	nw.	H. E. Dean
Eldon	Miller	934	41	48.0	+ 4.4	78	23	20	6†	53	0.50	-2.54	0.24	0	3	12	18	1	sw.	E. H. Shepherd
Garber	Taney	950	1	51.7	.....	83	29	24	6	49	1.37	.....	0.45	0	5	5	6	20	e.	William H. Durham
Halley	Barry	1,350	11	.....	.....	.....	.....	.....	.....	1.60	.....	-1.88	0.56	0	7	18	8	5	se.	A. W. Madison
Harrisonville	Cass	904	58	47.2	+ 5.9	79	23	20	31	53	0.44	-2.36	0.35	0	3	16	8	7	sw.	John H. Patterson
Jefferson City	Cole	557	46	48.0	+ 4.4	77	23	21	6	46	0.78	-2.28	0.37	0	3	19	9	3	w.	Mrs. Frank Kliegel
Lamar	Barton	980	48	50.8	+ 4.8	80	26	26	31	52	0.88	-2.31	0.48	0	2	21	4	6	sw.	Jesse A. Mann
Lamonte	Pettis	867	35	49.2	+ 5.2	74	23	22	6†	46	0.85	-2.23	0.50	0	4	15	10	6	se.	J. E. Wheeler
Lebanon	Laclede	1,265	48	48.0*	+ 3.0	75	29	24	31	46	0.58	-2.90	0.29	T	3	16*	9*	5*	sw.	Mrs. Lou Mulcare
Lexington	Lafayette	688	51	47.5	+ 4.1	75	10	20	31	42	0.51	-2.27	0.48	0	2	22	9	0	w.	Miss Carrie Loomis
Lockwood	Dade	1,078	30	52.0	+ 4.7	78	29	27	6†	39	1.04	-2.52	0.72	0	2	24	6	1	sw.	Hubert A. Nieman
Marshall	Saline	779	49	48.4	+ 5.4	75	28	21	6†	39	1.21	-1.71	0.63	0	3	23	6	2	sw.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	35	51.2	+ 5.8	78	30	24	6	38	2.60	-1.27	1.79	0	6	18	8	5	s.	Mo. Fruit Exp. Sta.
Neosho	Newton	1,011	49	51.8	+ 3.7	79	29	25	6†	43	1.10	-2.45	0.53	0	6	18	11	2	sw.	U. S. Fisheries Sta.
Nevada	Vernon	862	43	52.2	+ 7.3	77	28	25	6†	40	0.78	-2.09	0.42	0	2	14	5	12	sw.	George A. Kaupp
Sellman	Barry	1,542	35	53.3*	+ 6.7	79	29	28	12†	38	0.88	-2.72	0.35	0	4	20*	5*	5*	w.	Floyd E. Fawver
Seymour (near)	Webster	1,642	30	50.4	+ 5.0	79	6	24	17	54	1.01	-2.65	0.50	T	4	16	9	6	s.	A. L. Hailey
Springfield	Greene	1,324	48	50.9	+ 5.7	78	29	27	31	36	1.29	-2.10	0.74	0	4	19	8	4	sw.	U. S. Weather Bureau
Versailles	Morgan	1,037	4	50.6	.....	77	28	21	6	43	0.62	-1.74	0.30	0	4	14	10	7	sw.	I. M. Wilson
Warrensburg	Johnson	878	49	49.7	+ 5.7	74	10	22	31	40	0.17	-2.92	0.09	0	2	13	11	7	sw.	E. A. Markey
Warsaw	Benton	687	35	51.4	+ 4.4	78	28	24	6†	46	1.39	-2.16	0.96	0	5	16	8	7	sw.	Everett Martin
Division means and extremes				50.2	+ 5.0	83	29	20	6†	54	1.00	-2.18	1.79	T	4	17	9	5	sw.	
Southeastern Division																				
Arcadia	Iron	926	55	49.7	+ 5.1	79	26	23	6†	45	1.14	-2.91	0.41	0	6	22	5	4	w.	Arcadia College
Birch Tree (near)	Shannon	1,000	41	52.1	+ 4.8	79	30	26	13	43	1.44	-2.54	0.47	0	5	24	4	3	s.	V. H. Kirkendall
Campbell	Dunklin	314	10	52.3*	+ 4.3	83	26	27	18	.....	3.74	-2.13	1.18	0	7</					



Daily Precipitation for March 1936

Continued on next page



Daily Precipitation for March 1936—Continued from preceding page

Stations	Drainage-basins	Day of month																															Total				
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31					
<i>Southeastern Div.—Concluded</i>																																					
Farmington	St. Francis							..	.42		.17	T.			T.					..	.66			..	.22		T.	.19					1.66				
Fisk	do		.18						.22		.17	.05			T.	.15				..	.53			..	.48	.03		.09	.33				2.23				
Fredericktown	do								.36		.12										.46				.07	.32		.15					1.48				
Goodland	Black							.28	.16		.35										.47					.30							1.69				
Greenville	St. Francis								.60		.08										.39				.11	.09			.13				1.27				
Jackson	Mississippi								.92		.07				.04						.07	1.00		.32									2.78				
Koshkonong	Black		.16						.10												.42	.03		.55				.36					1.26				
Leeper	do								.56		.06											.33			.15	.22		.01					1.33				
Marble Hill	Mississippi								.95		.08												.75		.15	.23			.12				2.28				
Meramec Park	Meramec								.12		.17				.08						.42			.39	.38		1.36	.12					3.65				
Morehouse	Mississippi								.12		.14						.26	.22			.05	.67	.03		.01	1.48	.14	.08	.40				4.05				
New Madrid	do		.24	T.		T.			.10	.03		.06													.24								0.91				
Owensville	Gasconade								.30						.18										.44	.36		.24	.36				2.99				
Parma	St. Francis		.18						.25		.16						.30						.45		.43	.06			.10				1.42				
Poplar Bluff	Black								.18				.20										.20		.90								1.40				
Rolla	Meramec								.30																								1.67				
St. Louis**	Mississippi	T.	T.					T.	T.		.16				.19						.17	.10		T.	1.06	T.		.04			T.		1.45				
St. Louis University*	do								.17						.18						.31	.07			.84		T.						1.59				
Salem	Meramec								.20		.15						.48				..	.95		..	.54	.21		.58	.55					3.48			
Sikeston	Mississippi		.02								.15																							1.14			
Union	Meramec								.03						.35																			1.56			
Valley Park	do		T.								.13				.16																			1.27			
Williamsville	Black								.45		.07	T.																						1.07			
Willow Sprgs. (near)	White		.03								.20																							1.07			
Calro, Ill.**	Mississippi		.03						.01	.23		.12			T.	.17	.27				.69	.19		T.	.71	.17		1.45				T.		4.04			

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. **||** Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. **T.** Trace, or less than 0.01 inch.  
**\*\*\*** Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. **\*\*** Precipitation in the next following measurement; separate dates of fall not recorded. **\*** Precipitation is for 24-hour period, midnight to midnight. **†** Estimated. **‡** Partially estimated. **||||** Incomplete.

Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for March 1936  
(See precipitation data in table on preceding page)

Station	Data	Day of month																															Monthly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Lakeside	Evaporation	.084	.062	.108	.191	.133	.114	.080	.105	.053	.113	.134	.170	.126	.152	.140	.106	.139	.097	.183	.081	.159	.174	.188	.237	.198	.220	.237	.133	.305	.191	.177	4.590
(Osage Dam)	Mean temperature	46	44	51	47	44	42	50	48	51	54	45	42	48	51	44	42	42	50	44	49	51	58	67	52	50	56	46	56	58	48	34	48.8
	Wind movement	60	43	47	74	64	54	40	47	36	50	76	107	86	68	49	43	91	39	68	121	67	67	97	95	76	60	169	67	93	63	104	2,221

Observations taken at 7.30 a. m. Wind movement corrected to true velocities. For description see April 1932 report.

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#### MISCELLANEOUS PHENOMENA

Dust.—1st, 7th, 9th, 11th, 17th, 18th, 22d, 23d, 24th, 25th, 26th, 27th, 28th, 29th, 30th, 31st.

Floods.—In Mississippi River at Cairo, Ill., and below from the 25th and continued into April.

Frosts.—Killing, general as late as the 31st except in the extreme southeastern counties where killing frost occurred earlier in the month.

Fog.—Dense, 9th, 10th, 11th, 17th.

Hail.—Light, 10th at Amity, Conception, St. Joseph, 15th at Warrenton, 19th at Fortescue and Mound City, 22d in west and north parts of Nodaway County, 23d at Bethany, Mexico, Warrenton, Warsaw; moderate, 22d at Tarkio, 23d in vicinity of Aurora and Monett; heavy, 23d at Marionville, Republic, Springfield, and Turner Station, with considerable damage to orchards.

Halos.—Solar, 1st, 2d, 8th, 10th, 13th, 14th, 15th, 16th, 18th, 19th, 27th, 28th, 29th, 30th, 31st; lunar, 1st, 2d, 4th, 6th, 28th, 29th, 30th.

Sleet.—15th, 19th, 20th, 31st.

Smoke.—Dense, 7th.

Thunderstorms.—Local, 1st, 2d, 8th, 10th, 11th, 14th, 15th, 22d, 24th, 26th, 31st; more or less general, 23d.

Windstorms—Tornado.—A violent tornado cut a path from 50 to 300 yards in width through the northeastern quarter of Webster County, central portion of Laclede County, and the east-central portion of Camden County, between 2:45 and 3:30 p. m. on March 23. Four persons were killed and twenty-five injured. Property damages were estimated at \$150,000. The tornado first struck about one mile east of Marshfield, Webster County, and finally blew itself out as a twister in the vicinity of Bagnell Dam, Camden County.



Daily Temperatures for March 1936

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean			
Northern Division																																			
Brunswick	Maximum	54	57	68	64	51	57	60	64	71	75	75	68	56	63	60	55	57	69	67	63	62	76	76	72	70	76	66	78	75	64	44	64.9		
Brunswick	Minimum	33	31	37	37	28	21	31	41	33	47	36	32	27	32	33	39	26	37	40	41	31	35	49	60	40	30	46	28	40	38	35	21	35.3	
Chillicothe	Maximum	56	61	71	57	50	57	60	65	72	75	59	49	52	60	57	53	61	71	52	63	60	67	76	64	69	72	62	76	67	44	39	61.2		
Chillicothe	Minimum	26	31	35	34	28	19	25	30	30	42	33	29	24	29	31	36	22	28	40	30	32	39	52	37	27	42	27	27	34	31	17	31.2		
Columbia	Maximum	53	57	71	56	51	56	64	59	69	75	48	47	61	66	52	50	54	66	54	60	57	72	78	63	64	71	59	74	64	53	38	60.1		
Columbia	Minimum	34	34	45	32	28	21	34	45	33	44	39	33	27	34	37	36	28	36	38	34	36	51	57	42	35	39	31	46	45	31	24	36.4		
Fayette	Maximum	53	58	70	62	51	58	62	64	71	71	65	48	58	67	61	49	57	66	58	62	60	74	71	62	64	69	60	75	69	60	39	61.7		
Fayette	Minimum	33	33	37	38	26	20	32	44	30	44	37	32	24	31	33	39	24	32	38	32	38	48	55	41	28	47	29	39	42	37	22	34.8		
Grant City	Maximum	42	47	66	57	36	53	53	53	69	61	45	41	49	54	54	47	49	69	69	58	58	70	75	71	60	62	61	67	67	41	33	56.0		
Grant City	Minimum	30	32	32	29	28	19	27	33	31	40	33	28	24	26	28	32	22	40	37	28	28	44	57	25	28	46	24	38	31	28	16	31.1		
Hannibal	Maximum	46	53	69	63	47	47	57	61	67	76	66	45	50	57	54	49	51	55	52	59	55	73	59	62	60	67	61	74	68	58	39	58.7		
Hannibal	Minimum	30	32	41	33	25	17	29	42	34	46	37	34	24	29	30	36	27	30	33	32	34	43	55	43	35	44	29	42	41	34	21	34.3		
Kansas City	Maximum	60	61	71	56	50	62	63	63	73	75	48	50	61	65	52	51	63	72	54	66	60	73	79	61	65	66	65	78	64	45	36	61.7		
Kansas City	Minimum	32	35	41	32	30	27	33	39	33	41	36	32	29	35	34	38	29	48	38	34	37	58	70	78	55	61	73	63	33	29	49	39	27	36.1
Kidder	Maximum	56	55	69	40	47	55	59	60	69	74	49	46	50	63	54	50	57	69	52	62	58	70	78	55	61	71	63	75	61	42	38	58.3		
Kidder	Minimum	23	30	31	33	23	19	20	28	34	35	31	28	26	26	28	31	26	29	38	27	29	38	54	61	63	71	63	75	61	42	38	58.3		
Kirksville	Maximum	45	57	68	68	46	49	58	63	67	74	68	45	45	56	57	49	57	60	68	63	58	62	75	64	60	67	61	74	68	58	39	59.0		
Kirksville	Minimum	29	30	38	32	24	15	25	36	30	44	33	28	22	30	31	33	25	31	37	30	30	43	57	38	28	41	27	38	34	30	17	31.8		
Louisiana	Maximum	48	53	70	45	43	49	50	57	65	72	50	47	55	60	55	43	50	55	50	57	67	68	80	57	60	60	60	62	60	52	37	55.7		
Louisiana	Minimum	33	35	35	40	22	18	27	40	30	43	40	33	25	30	35	33	25	25	41	34	38	40	53	53	27	45	33	39	40	36	33	34.9		
Macon	Maximum	49	56	69	43	49	53	57	65	68	76	46	46	51	59	55	48	56	62	45	62	58	40	57	57	61	71	59	74	61	48	38	57.7		
Macon	Minimum	28	31	36	33	25	16	23	34	32	35	34	30	24	29	31	35	26	32	37	30	31	41	50	40	32	42	26	31	37	33	19	31.6		
Maryville	Maximum	50	53	65	57	42	54	58	59	69	64	45	45	47	63	52	51	59	68	63	63	61	69	76	69	60	63	63	73	64	43	35	58.2		
Maryville	Minimum	28	28	33	29	28	21	29	32	34	39	31	27	26	25	27	32	23	23	41	27	35	27	47	55	31	27	45	21	38	30	27	15	30.9	
Mexico	Maximum	51	57	71	45	52	53	62	62	70	75	48	47	58	65	52	49	55	64	50	61	59	74	80	58	63	74	59	75	64	52	40	59.5		
Mexico	Minimum	30	32	33	36	25	16	19	30	32	33	37	30	25	26	31	36	21	28	35	31	33	37	50	44	30	35	28	30	43	34	22	31.4		
Oregon	Maximum	55	58	69	60	46	59	62	60	72	64	47	48	49	67	56	52	62	72	62	66	60	72	79	71	64	61	64	71	65	46	38	60.5		
Oregon	Minimum	31	31	35	33	24	30	34	40	39	31	28	29	28	30	36	26	46	37	31	31	31	50	60	32	22	38	24	45	32	29	16	33.6		
St. Joseph	Maximum	57	58	69	51	47	59	62	61	71	70	47	47	50	66	52	52	61	70	54	65	60	71	78	56	64	63	64	77	61	41	38	59.4		
St. Joseph	Minimum	32	35	39	35	28	24	33	37	39	39	34	31	31	32	33	37	29	45	38	32	36	53	50	35	36	31	27	47	34	24	18	34.6		
Trenton	Maximum	56	57	70	64	39	52	49	64	70	75	60	44	49	60	53	52	56	69	68	65	60	63	76	65	59	71	65	75	62	66	56	61.3		
Trenton	Minimum	30	31	37	34	29	18	28	34	29	46	34	30	24	28	30	33	24	34	38	30	33	48	58	34	27	45	25	38	34	31	18	32.6		
Unionville	Maximum	47	54	67	41	44	28	62	66	73	43	45	45	45	56	50	49	56	65	47	63	58	61	75	54	61	72	60	74	57	42	39	55.4		
Unionville	Minimum	22	29	30	32	24	15	16	25	30	31	32	28	21	24	32	31	25	26	33	29	30	32	47	36	27	30	25	26	30	22	17	27.6		
Warrenton	Maximum	51	57	72	71	50	51	65	64	67	75	70	47	60	62	61	51	50	61	59	57	56	74	75	67	63	74	74	74	70	63	52	62.7		
Warrenton	Minimum	31	34	40	39	25	18	35	47	37	43	39	32	28	33	35	38	26	29	40	33	35	44	57	51	37	45	31	41	52	36	22	36.5		
Southeastern Division																																			
Appleton City	Maximum	65	60	72	63	56	63	70	62	72	74	67	50	69	67	58	53	59	70	64	65	62	71	70	68	66	64	60	76	66	60	40	63.9		
Appleton City	Minimum	32	35	38	38	31	26	37	47	35	46	37	31	29	30	34	36	37	40	37	41	34	37	35	58	38	33	47	27	38	43	38	23	36.2	
Clinton	Maximum	66	63	75	63	57	65	72	67	73	76	70	50	71	71	60	65	62	70	59	66	63	74	71	63	68	66	70	70	62	62	40	65.5		
Clinton	Minimum	32	33	38	38	32	32	35	48	35	47	35	31	38	32	35	37	29	37	39	32	36	50	57	39	33	48	38	40	40	36	23	37.3		
Eldon	Maximum	55	59	73	51	55	66	73	64	73	75	51	48	71	69	55	52	56	68	50	61	61	73	78	58	67	75	60	76	72	55	40	62.6		
Eldon	Minimum	31	32																																





## CLIMATOLOGICAL DATA

19

## MISSOURI SECTION

ROSCOE NUNN  
ST. LOUIS, MO.

VOL. XL

APRIL 1936

No. 4

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## GENERAL SUMMARY

Very low temperatures occurred during the first week of the month. On the 3d as low as 9° was registered in Nodaway County and 10° in several other northern counties. As low as 10° occurred in the Southwestern Division and 18° in the Southeastern. These were not record-breaking temperatures for the State, as lower readings occurred in April 1899 and 1920, the lowest of record for April in Missouri being 4° on the 5th in 1920 at Edgerton, Platte County; but at some individual stations previous April records were surpassed, notably at St. Louis, where a minimum of 20° on the 3d was 2° lower than the previous April minimum of 22° in 1920. The cold spell ended about the 10th, and thereafter temperatures averaged nearly normal, with cool days about the 17-18th and 22-23d, and unusually warm days on the 20th, 25th, and 27-30th. Frost occurred frequently during the first three weeks, with killing as late as the 23d in some localities, but no serious frost damage was reported except to peaches and cherries in some southern counties.

Precipitation was light, decidedly less than normal in all sections, but with greatest deficiency in the Southwestern Division; however, a few stations received slightly more than normal. The rainfall was fairly well distributed over the State and through the month, except exceedingly light in the Boonville-Columbia-Fulton area. This rainfall kept young plants in good condition; but older crops, such as wheat, rye, barley, alfalfa, and grasses, were in need of more moisture, this being the fifth month in succession with light precipitation. For the last four months, January-April, inclusive, the total rainfall for the State averaged 6.23 inches, as compared with a normal average of 11.54 inches; the amount received in the four months was therefore only 54 per cent of normal.

The month was favorable for farm work, with a large number of clear days (16) and the ground generally in good working condition. Corn planting was well advanced.

Nearly normal stages characterized river conditions the first few days, except the Mississippi was in flood from the mouth of the Ohio to New Madrid and below, but stages declined almost steadily thereafter and were considerably lower than normal at the end of the month.

## TEMPERATURE

The monthly mean temperature for the State, 70 stations reporting, was 53.0°, or 2.2° below normal. The highest monthly mean was 58.6° at Caruthersville, and the lowest monthly mean was 47.8° at Unionville. The highest temperature recorded was 95° at Lamar on the 14th, and the lowest was 9° at Conception and Maryville on the 3d. The greatest daily range was 59° at Harrisonville on the 4th.

## PRECIPITATION

The average precipitation for the State, 123 stations reporting, was 2.45 inches, or 1.46 inches less than normal. The greatest local monthly amount was 5.45 inches at Parma, and the least local monthly amount was 0.61 inch at Boonville. The greatest amount in any twenty-four hours was 2.85 inches at Neosho on the 27-28th. The average number of days with 0.01 inch or more of precipitation was 8. The snowfall for the State

averaged 0.5 inch, or 0.1 inch less than normal. The greatest local monthly snowfall was 6.0 inches at Gorin and Kahoka.

## MISCELLANEOUS PHENOMENA

Dust.—4th, 8th, 15th, 16th, 20th.

Flood.—In Mississippi River at Cairo, Ill., and below continued from March until April 26th.

(Continued on page 19)

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind				Relative humidity			Percentage of sunshine
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	7 a. m.	12 noon	7 p. m.	
Columbia.....	30.04	30.39	7	29.55	5	9.7	26	sw.	20	67	44	46	62
Kansas City.....	30.03	30.45	7	29.51	4	11.5	34	sw.	20	66	42	39	79
St. Joseph.....	30.04	30.43	7	29.54	4	10.2	32	n.w.	15	62	40	41	74
St. Louis.....	30.05	30.44	8	29.49	5	12.5	43	sw.	27	69	52	53	60
Springfield.....	30.04	30.37	7	29.49	5	11.1	32	s.	4	70	50	45	67
Cairo, Ill.....	30.05	30.47	8	29.42	5	10.3	30	n.	21	77	58	61	62
Keokuk, Iowa..	30.06	30.43	7	29.66	5	8.7	27	n.w.	20	65	46	46	68

## COMPARATIVE DATA FOR APRIL

Year	Temperature			Precipitation					Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy
1888.....	57.9	94	20	1.92	1.54	2.37	1.85	....	6	8	..	..
1889.....	55.7	90	27	2.66	2.84	3.31	1.83	....	8	..	..	..
1890.....	56.2	93	25	3.58	2.26	3.43	5.05	....	..	..	..	..
1891.....	56.8	93	15	3.46	3.88	4.08	2.41	..	9	..	..	..
1892.....	53.1	90	24	5.83	5.14	5.36	7.01	0 0	11	9	8	13
1893.....	53.9	95	19	8.27	6.37	9.14	9.29	0 0	12	8	9	13
1894.....	56.1	95	20	3.11	2.24	3.62	3.58	T.	8	12	10	8
1895.....	57.9	100	24	2.04	1.87	2.08	2.17	T.	7	14	8	8
1896.....	61.9	92	17	3.57	3.10	4.35	3.25	0 0	9	11	12	7
1897.....	54.4	88	21	4.65	4.07	3.78	6.10	T.	10	10	11	9
1898.....	52.5	90	14	3.64	3.77	3.75	3.40	T.	10	12	9	9
1899.....	54.0	96	6	3.80	3.46	4.02	3.93	3.8	8	12	9	9
1900.....	56.7	89	21	3.50	3.05	3.66	3.78	0.7	9	11	10	9
1901.....	53.3	94	24	2.96	2.63	2.83	3.41	1.8	8	14	7	9
1902.....	53.9	95	19	2.82	1.98	3.30	3.18	T.	11	13	11	6
1903.....	55.9	91	26	3.37	3.97	3.34	2.79	1.2	9	11	10	9
1904.....	49.0	84	19	5.63	6.14	6.07	4.67	2.7	9	15	6	9
1905.....	54.9	92	20	3.09	3.66	2.28	3.34	0.3	6	14	8	8
1906.....	59.5	93	22	2.42	2.67	2.40	2.18	0 0	6	17	7	6
1907.....	48.7	89	16	3.33	2.62	3.83	3.65	T.	8	11	8	11
1908.....	56.6	90	18	5.89	2.55	6.58	8.53	T.	11	11	8	11
1909.....	64.8	93	19	4.72	4.36	3.60	6.21	T.	8	13	9	8
1910.....	54.8	97	21	3.58	2.74	3.55	4.45	0.9	11	12	7	11
1911.....	53.5	91	20	4.93	4.28	4.70	5.81	T.	10	12	8	10
1912.....	56.0	89	24	6.08	3.75	6.47	8.00	0.7	10	13	7	10
1913.....	56.2	94	25	3.32	3.36	3.10	3.60	T.	7	16	5	9
1914.....	55.2	91	18	3.14	2.57	3.11	3.75	T.	8	12	7	11
1915.....	61.9	96	18	2.12	1.93	2.64	1.79	T.	7	16	8	6
1916.....	53.5	93	21	3.30	2.71	3.93	3.27	1.9	10	11	8	11
1917.....	53.2	89	19	5.97	5.60	5.08	7.23	1.2	12	12	6	12
1918.....	50.8	93	19	5.34	3.62	6.26	7.14	0.9	11	12	6	12
1919.....	55.3	94	20	3.03	3.15	3.46	2.48	T.	9	12	7	11
1920.....	50.2	89	4	3.84	4.86	3.36	3.31	4.8	11	11	7	12
1921.....	56.0	91	19	5.36	4.70	6.22	6.16	1.1	10	13	7	10
1922.....	57.3	91	24	6.41	4.96	8.47	5.81	T.	11	13	6	11
1923.....	54.2	92	14	3.26	2.52	3.38	3.89	0.4	8	14	8	8
1924.....	56.6	95	11	2.14	1.26	2.78	2.39	T.	6	14	8	8
1925.....	61.0	92	24	4.12	4.12	4.73	3.62	0 0	10	12	9	9
1926.....	49.9	81	11	2.42	2.39	2.17	2.69	2.4	8	14	6	10
1927.....	57.7	88	18	8.68	6.73	8.60	10.70	T.	14	10	7	13
1928.....	61.6	88	16	4.85	2.76	5.42	6.37	0.2	8	13	7	10
1929.....	57.4	96	27	6.14	6.32	6.55	5.66	0 0	12	11	8	11
1930.....	59.1	96	23	2.03	1.89	2.82	1.39	0 0	8	14	8	8
1931.....	57.6	95	22	2.95	2.95	2.74	3.16	T.	9	14	6	10
1932.....	54.9	88	22	2.58	2.44	2.61	2.78	0 0	8	14	8	8
1933.....	54.9	88	22	3.84	2.05	3.84	5.64	0.7	10	11	9	10
1934.....	56.5	90	24	2.51	2.08	2.61	2.84	T.	7	16	8	6
1935.....	52.3	90	23	2.90	3.10	3.02	2.69	0.7	9	9	7	14
1936.....	53.0	95	9	2.45	2.00	1.93	3.41	0.6	8	16	7	7
Period.....	55.2	100	4	3.91	3.87	4.05	4.31	0.6	9	12	8	10



## Climatological Data for April 1936

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches				Number of days				Prevailing direction of wind	Observers	
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelted	With precip., .01 inch or more	Clear	Partly cloudy			Cloudy
Northern Division																				
Bethany	Harrison	916	41	51.2	- 0.3	90	20	10	3	50	2.09	-1.20	0.90	1.9	6	20	6	4	nw.	A. S. Cumming
Brunswick	Chariton	652	55	54.5	+ 0.3	89	14	16	3	44	2.89	-0.94	0.72	1.0	14	20	2	7	se.	O. K. Bevecke
Chillicothe	Livingston	779	27	51.3	- 1.8	91	20	13	3	51	3.28	+0.06	0.72	0.5	9	17	6	7	nw.	Wm. J. Olenhouse
Clifton Hill	Randolph	731	37	52.6	- 0.9	89	14†	15	3	44	2.27	-1.09	1.00	1.7	8	18	5	7	sw.	Dr. A. J. Bradsher
Columbia	Boone	740	46	53.0	- 1.9	90	30	18	3	37	0.63	-3.14	0.15	0.2	10	16	6	8	s.	U. S. Weather Bureau
Conception	Nodaway	980	47	50.8	- 1.4	90	20	9	3	45	2.35	-0.38	1.00	1.0	6	14	10	6	nw.	Fr. Adelhelm Hess
Downing	Schuyler	876	15	49.0	- 4.2	89	20	10	3	48	2.05	-1.83	0.58	2.5	10	17	4	9	s.	James Taylor
Edgerton	Platte	856	16	52.0 <sup>a</sup>	- 1.8	89	20	12	3	51	3.51	+0.43	1.19	0.8	7	24	1	5	s.	Fred L. Stiff
Elsberry	Lincoln	449	5	50.6	.....	89	14†	18	3	51	0.94	.....	0.28	T.	8	14	8	8	n.	Ray E. Mills
Fayette	Howard	680	56	53.1	- 1.1	91	30	16	3	49	1.15	-2.40	0.60	T.	4	13	9	8	s.	Harry P. Mason
Fulton	Callaway	818	48	51.6	- 3.0	90	30	16	3	46	0.85	-3.16	0.26	T.	13	16	4	10	n	Clyde C. Herring
Gorin	Scotland	700	49	.....	.....	.....	.....	.....	.....	1.98	-1.43	0.56	6.0	8	19	5	6	uw.	W. L. Harker	
Grant City	Worth	1,134	32	49.4	- 2.8	87	20	10	3	46	1.25	-1.71	0.45	0.8	7	18	5	ne.	Howard Rybolt	
Hannibal	Marion	759	44	51.0	- 2.4	87	20†	15	3	44	1.17	-2.02	0.36	0.5	13	14	2	14	n.	Hannibal Water Dept.
Kansas City	Jackson	741	47	54.3	- 0.5	91	30	16	3	43	1.89	-1.25	0.45	1.1	12	13	9	8	n.	U. S. Weather Bureau
Kidder	Caldwell	1,020	44	50.6	- 1.6	90	20	10	3	42	2.92	-0.36	1.22	0.5	8	18	7	5	se.	Roscoe L. Terry
King City	Gentry	1,095	10	.....	.....	.....	.....	.....	.....	3.63	+0.33	1.77	1.5	6	5	20	5	nw.	John M. Martin	
Kirkville	Adair	969	47	50.9	- 1.0	89	20	11	3	46	1.58	-2.52	0.40	2.6	6	20	4	6	n.	Prof. J. S. Stokes
Linn	Linn	816	4	.....	.....	.....	.....	.....	.....	2.82	.....	1.00	1.0	11	20	4	6	e.	J. Robert Hall	
Louisiana	Pike	469	42	49.8	- 4.2	87	20	18	3	50	1.37	-2.35	0.60	T.	5	18	7	5	s.	Stark Bro's Nurseries
Macon	Macon	875	37	49.8	- 3.3	88	20†	13	3	47	1.69	-1.97	0.60	0.2	6	16	7	7	nw.	W. C. Brown
Maryville	Nodaway	1,169	46	49.9	- 0.9	87	20	9	3	45	2.67	-0.34	1.52	1.3	7	20	2	8	nw.	R. B. Montgomery
Mexico	Andrain	800	47	50.2	- 3.6	90	30	16	3	44	1.16	-2.59	0.53	0.5	11	17	5	8	se.	Mrs. Abbie Snoddy
Monroe City	Monroe	748	15	.....	.....	.....	.....	.....	.....	1.04	-2.63	0.40	1.0	5	13	11	6	6	ne.	J. S. Conway
Oregon	Holt	1,048	80	52.4	- 0.3	88	20†	12	3	41	2.47	-0.82	0.92	2.5	6	20	4	6	ne.	Miss Mina Wright
St. Charles	St. Charles	520	48	51.6	- 4.0	89	20	20	3	43	2.59	-1.16	1.05	T.	12	15	5	10	se.	Martin L. Comann
St. Joseph	Buchanan	957	26	52.7	- 1.5	90	30	13	3	40	2.91	-0.29	1.10	2.2	8	18	5	7	n.	U. S. Weather Bureau
Shelbina	Shelby	779	43	.....	.....	.....	.....	.....	.....	1.71	-2.04	0.39	1.0	8	.....	.....	.....	.....	.....	J. C. Jewett
Steffenville	Lewis	650	38	50.6	- 2.5	88	30	13	3	41	1.96	-1.62	0.50	4.0	9	18	6	6	s.	Frank Hall
Tarkio	Atchison	916	33	50.2	- 2.0	86	13†	11	3	46	3.33	+0.09	1.89	2.0	6	15	6	9	sw.	Albert Volker
Trenton	Grundy	822	40	52.6	- 0.1	90	20	13	3	48	1.77	-1.81	0.76	2.0	8	16	8	6	n.	W. H. Estes
Unionville	Putnam	1,062	43	47.8	- 3.2	89	20	10	3	50	2.09	-1.61	0.80	2.5	5	14	3	13	s.	John H. Schick
Warrenton	Warren	816	54	52.6	- 2.2	87	14†	17	3	48	1.60	-2.44	0.64	T.	10	11	9	9	se.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia	574	65	49.6	- 2.7	87	20	15	8	39	1.57	-1.42	0.43	2.9	12	8	10	nw.	U. S. Weather Bureau	
<b>Division means and extremes</b>	<b>and extremes</b>	<b>.....</b>	<b>.....</b>	<b>51.2</b>	<b>- 2.0</b>	<b>91</b>	<b>20†</b>	<b>9</b>	<b>3</b>	<b>51</b>	<b>2.00</b>	<b>-1.87</b>	<b>2.70</b>	<b>1.3</b>	<b>8</b>	<b>16</b>	<b>7</b>	<b>7</b>	<b>nw.</b>	<b>.....</b>
Southwestern Division																				
Appleton City	St. Clair	853	41	55.3 <sup>a</sup>	- 0.8	92	14	16	3	48	1.95	-2.18	1.02	0.5	6	15 <sup>a</sup>	10 <sup>a</sup>	4 <sup>a</sup>	nw.	Rolla Brown
Buffalo	Dallas	1,200	6	.....	.....	.....	.....	.....	.....	1.79	.....	0.59	0	7	19	4	7	.....	.....	C. M. McCullister
Caplinger Mills	Cedar	750	10	.....	.....	.....	.....	.....	.....	1.73	-1.86	0.84	T.	5	19	6	5	se.	.....	Ozark Utilities Co.
Clinton	Henry	765	43	56.0	- 0.3	92	14	18	3	46	2.02	-2.15	0.93	0	7	15	12	3	sw.	A. E. Derwent, M. D.
Concordia	Lafayette	784	21	.....	.....	.....	.....	.....	.....	0.68	-2.66	0.39	T.	4	20	6	4	s.	.....	Mrs. W. H. Stratman
Dean	McDonald	1,000	32	54.0	- 2.7	90	13	10	3	50	2.73	-1.96	1.97	T.	6	19	7	4	sw.	H. F. Dean
Eldon	Miller	934	41	51.8	- 3.6	90	14	18	3†	44	1.82	-2.34	0.94	2.0	12	11	11	8	sw.	E. H. Shepherd
Garber	Taney	950	1	55.4	.....	93	15	19	3	46	1.45	.....	0.56	T.	6	14	6	11	e.	William H. Durham
Hailey	Barry	1,350	11	.....	.....	.....	.....	.....	.....	0.97	-3.42	0.40	0	3	17	5	8	sw.	A. W. Madison	
Harrisonville	Cass	904	58	51.0	- 2.9	90	30	14	3†	59	1.00	-2.38	0.54	T.	7	14	5	11	sw.	John H. Patterson
Jefferson City	Cole	557	46	51.6	- 4.4	89	14†	17	3	40	1.44	-2.54	0.68	0.2	10	14	8	5	s.	Mrs. Frank Kliegel
Lamar	Barton	980	48	55.1	- 1.5	95	14	17	3	52	2.57	-1.95	1.70	T.	5	16	9	5	sw.	Jesse A. Mann
Lamonte	Pettis	867	35	52.4	- 2.8	87	13†	16	3	45	1.65	-2.04	1.30	0.7	9	15	9	6	sw.	J. E. Wheeler
Lebanon	Laclede	1,265	48	52.0	- 3.5	85	13†	15	3	39	3.78	-0.57	0.83	T.	8	17	5	8	n.	Mrs. Lou Mulcare
Lexington	Lafayette	688	51	52.8	- 1.8	91	14	16	3	50	2.09	-1.71	0.95	0.6	10	20	7	3	n.	Miss Carrie Loomis
Lockwood	Dade	1,078	30	56.0	- 0.5	90	14	18	3	38	2.81	-1.72	1.48	T.	8	18	6	6	sw.	Hubert A. Nieman
Marshall	Saline	779	49	53.8	- 1.0	86	30	16	3	39	1.94	-1.95	0.87	T.	6	19	6	5	sw.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	35	53.8	- 1.1	87	14†	17	3	39	2.53	-1.99	0.90	T.	7	18	9	3	s.	Mo. Fruit Exp. Sta.
Neosho	Newton	1,011	49	55.3	- 3.0	89	14	18	2†	48	3.96	-0.60	2.85	T.	5	20	6	4	nw.	U. S. Fisheries Sta.
Nevada	Vernon	862	43	56.2	+ 0.5	92	14	15	3	43	2.26	-2.03	0.83	0	5	17	6	7	ne.	George A. Kaupp
Seligman	Barry	1,542	35	56.0 <sup>a</sup>	- 0.6	87	13†	16	3	41	0.91	-3.15	0.38	T.	5	17	7	5	se.	Floyd E. Fawver
Seymour (near)	Webster	1,642	30	52.8	- 2.9	87	14	16	3	44	2.60	-2.32	0.66	0	7	17	7	6	se.	A. L. Hailey
Springfield	Greene	1,301	48	54.6	- 1.4	88	14	17	3	37	2.37	-1.49	0.93	0	9	19	4	7	nw.	U. S. Weather Bureau
Versailles	Morgan	1,037	4	54.6	.....	92	14	16	3	46	1.19	-3.25	0.36	0.8	10	17	3	10	nw.	I. M. Wilson
Warrensburg	Johnson	878	49	54.2	- 1.9	85	14	16	3	42	0.89	-2.77	0.47	T.	4	17 <sup>a</sup>	4 <sup>a</sup>	8 <sup>a</sup>	sw.	E. A. Markey
Warsaw	Benton	687	35	55.5	- 1.2	91	14	18	3	49	1.66	-2.80	0.63	0.4	8	16	5	9	sw.	Everett Martin
<b>Division means and extremes</b>	<b>and extremes</b>	<b>.....</b>	<b>.....</b>	<b>54.1</b>	<b>- 1.9</b>	<b>95</b>	<b>14</b>	<b>10</b>	<b>3</b>	<b>49</b>	<b>1.93</b>	<b>-2.12</b>	<b>2.85</b>	<b>0.2</b>	<b>7</b>	<b>17</b>	<b>7</b>	<b>6</b>	<b>sw.</b>	<b>.....</b>
Southeastern Division																				
Arcadia	Iron	926	55	51.4	- 3.9	90	15	20	3	46	2.55	-2.27	0.72	0.1	10	15	2	13	n.	Arcadia College
Birch Tree (near)	Shannon	1,000	41	55.0.																



## Daily Precipitation for April 1936

Stations	Drainage-basins	Day of month																														Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		..
Northern Division																																	
Amity	Grand	T.	.20	T.		T.	T.				.01				T.							1.41						.12	.60		1.33		3.77
Bethany	do	.15	.04					T.														.46						.32	.22		.90		2.09
Bowling Green	Mississippi	.02	.22	.01		.35	.18	.01			.07	.03	.02		.03							.05						.11	.41				1.01
Brunswick	Grand	.02	.29	T.		.13	.15				.07	.02		.05								.15						.56	.52	.72			2.89
Canton	Mississippi	.05	.15	T.		.23	T.				.13											.38						.30	.57				1.96
Chillicothe	Chariton	.02	.07			.53	T.				.03	T.										.61						.23	.70	.72	.46		3.28
Clifton Hill	Missouri	.14	T.		T.	.13	.01	.01		.03	.01	T.			T.							.13						1.00	.39	.10			2.27
Columbia	do	.11	.04			T.					T.	T.										.06						.08	.15	.01			0.63
Conception	Mississippi	.13	.18		.06	.40	T.				.04		.06		T.							.58						.46	.11		1.00		2.35
Downing	Missouri	.20	.20			T.					.20											1.19						.16	.23	.21			2.05
Edgerton	Mississippi	.09	.06		T.	.05	.30			T.	T.		T.									.33						1.02	.18		.72		3.51
Edina	do	T.	.12			.60	T.	T.	T.	T.	T.											.07						.17	.07				1.73
Elberly	Missouri	.05	.05	T.		.26	.05	.01		.06	.02		.02									.05						.26	.17				0.94
Farber	do	.05	.05			.26	.05	.01		.06	.02											.05						.26	.17				1.29
Fayette	Grand	.09	.15		.10	.50	T.			T.		T.			T.							1.00						.36	.58	.08	2.70		4.82
Fulton	Mississippi	.05	.04			T.					T.		T.		T.							.24						.34	.46	.10			1.98
Gallatin	Grand	.05	.04			T.					T.		T.		T.							.32						.30	.05		.45		1.25
Gorin	Mississippi	.02	.21	T.		.06	.36	.01	T.	.01	.07	.06		.03	.01							.10						.30	.07	.03			1.17
Grant City	Mississippi	.09	.01			.57					.20				T.							.27						.29	.06				1.46
Hannibal	Grand	.06	.06		.03					.04	.04	T.		T.	T.							.23	.15					.32	.35				2.21
Hermantown	Missouri	.08	.20								T.	T.										.86						.45	.04	.04	.34		1.89
Kahoka	Mississippi	.05	.20								T.	T.										.80						.74	.06		1.77		3.63
Kansas City	do	.23	.33								.04											.40						.30	.30				1.58
Kidder	Grand	.08	.18	T.	.35	.02					.04	T.	.01									.53						.37	.63				2.00
Kirkville	Mississippi	T.	.11		T.	.60					.04	T.	.01									.20						.12	.59	1.00	.03		2.82
La Belle	Grand	T.	.11		.13						.02											.41						.22	.05				1.37
Linneus	Chariton	.01	.06		.05	.54					.02											.28						.26	.09	.04			1.06
Louisiana	Mississippi	.05	.07			T.				T.	T.			T.								.25						.23	.64	.18			1.69
Lucerne	Mississippi	.07	.30			.75	.44				.74											.40						.52	.11	.73	.79		1.86
Macou	do	.07	.05	T.		.10	.23	T.		.04	.05			.05								.02						.24	.41				2.67
Madison	Grand	.05	.41			.23	T.															.71						.25	.28		.02		1.16
Maryville	Mississippi	.15	.13																			.36						.05	.36	.38	.06		2.20
Memphis	Missouri	.10	T.			.72	.19				T.	.09	.04									.67						.32	.08		.07		1.04
Mexico	Mississippi	.02	.10			.79					.10	.06										.27						.64	.14	.12	.80		1.25
Millard	do	.32	.10							T.	T.											.15	.66					.25	.30	.10			2.47
Munroe City	do	.10				.86	T.			T.	T.											.10						.51	.12				1.81
New London	Missouri	T.	.10	T.		1.05	.05	T.		T.	.05		.08	.01								.09						.13	.69	.17	.07		1.97
Oregon	Mississippi	.14	.01	T.		.05	T.			T.	.05			T.								1.05	.05					.13	.69	.17	.07		2.59
Palmyra	Mississippi	.17	.17			.29	.22				.10				.02							.30						.76	.05	.20	.65		2.91
Paris	do	.15	.07		.10	.25	T.				.07											.20						.70	.20				1.71
Perry	Missouri	.08	.07		.10	.25	T.				.07											.35						.22	.50	.25	.14		1.64
Philadelphia	Grand	.07	.13	T.		.02	T.			.01	T.											.32						.27	.71	.14			1.96
St. Charles	Mississippi	T.	.11			.32	.05			.01	T.				.01							.76						.27	.21	.75	.30		3.33
St. Joseph	Chariton	.17	T.		.03	.64	.02	T.		.16	T.	.06			T.							.80						.30	.07				1.77
Shelbina	Mississippi	.16	.04		.10	.43	.02			T.	.04	T.	.03		T.							.04						.09	.36	.08			1.20
Shelbyville	do																					.14						.19	.28	.08			2.09
Steffensville	do																																1.60
Tarkio	do																																1.57
Trenton	do																																
Troy	do																																
Unionville	do																																
Warrenton	do																																
Keokuk, Ia.	do																																
Southwestern Division																																	
Appleton City	Osage	.08	T.		T.	.58	.02			T.	T.											.25						T.	.51	.51			1.95
Boonville	Missouri	.02	.07	T.		.11	.05	.02			T.											.04						.04	.02	.23			0.61
Buffalo	Osage	.53	.06	T.							.26				.01							.04						.07	.58				1.79
Caplinger Mills	do	.20				.84	T.				.05											.14						T.	.50				1.73
Clinton	Missouri	.25	T.			.32				.05												.32						.07	.39				2.02
Concordia	Neosho	.22	T.			.06																											



## Daily Precipitation for April 1936—Continued from preceding page

Stations	Drainage-basins	Day of month																														Total		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		..	
Southeastern Div.—Concluded																																		
Farmington	St. Francis	.54	T.	T.			.65	T.		.56		.15										.42							T.		1.25		8.67	
Fisk	do	.17	.08	T.		.23	2.08			.81		.11	T.				.07					T.								.16	.76	T.	4.47	
Fredericktown	do	.58	T.			.69			.54			.22											.24									.88	T.	3.05
Goodland	Black	.41	T.			.20	.10			.47		.05					.02					.36								.08	.02		1.71	
Greenville	St. Francis	.42		.26		1.12				1.07							.06														.56		3.49	
Jackson	Mississippi	.75	T.	T.		1.50	.31			.49		.05					.03					.12								.40		.50		4.15
Koshkonong	Black	.50				1.80				.34	.35											.47											3.46	
Leeper	do	.54	.04	.01		.28	.98			.64	.08	.05										.16							.03	.55	T.	3.36		
Marble Hill	Mississippi	.60				.88	.13			.55		.08						.08				.10										.75	3.36	
Meramec Park	Meramec	.35	.25			1.70	.20			.12	.13											.08	.07						.08	.17		2.15		
Morehouse	Mississippi	.82	T.			1.34	.48			.43	.04	.07					.02					.34	.17								.48		4.19	
New Madrid	do	.11	.05	T.	T.	.53	2.05			.42	.06	.22	.06				T.					T.	.95										5.21	
Owensville	Gasconade		.06	T.		.88	.13			.07	.21			T.								.03	T.						.52	.08		1.98		
Parma	St. Francis	.22				.97	2.35			.40		.10										.52	.51								.38		5.45	
Poplar Bluff	Black	.32				.32	2.73			.84	.04	.06											.33										6.04	
Rolla	Meramec	.50	.26	.01		1.00	.13			.03	.07											.07											2.41	
St. Louis***	Mississippi	.33	.01			.86			T.	.38	T.	.10	T.			.02						.17											2.80	
St. Louis University*	do	.09	.01		.01	.72				.31	T.	.12	.01			.01						.16							.02	.50	.50	.08	2.54	
Salem	Meramec	.55	T.			.80	.06			.28												.40									T.		2.09	
Sikeston	Mississippi	.28	.27			.24	1.70			.40	.02	.03	.13				.02						.50								.57	.07	4.23	
Union	Meramec	.18	.15			.97	.15	T.		.17			.04				T.					.14	.02							.37	.16	T.	2.35	
Valley Park	do	.20	.19	T.		.83	.18			.18	.19		.13	T.									T.	.04							.35	.36	3.08	
Williamsville	Black	.19	.14	T.		.26	1.23			.70	.06	.08	.01									.36									.44	.11	3.58	
Willow Sprgs. (near)	White	.30	.12	T.		.18	.26			.46	.28	.14										.12	.14								.02		2.02	
Cairo, Ill.***	Mississippi	.53	T.	T.	T.	1.91	.02			.42	.03	.11	T.			.15						.23							T.	.10	.29		3.79	

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. T. Trace, or less than 0.01 inch.  
 \*\*\* Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. \*\* Precipitation in the next following measurement; separate dates of fall not recorded. \* Precipitation is for 24-hour period, midnight to midnight † Estimated. ‡ Partially estimated. |||| Incomplete.

**Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for April 1936**  
 (See precipitation data in table on preceding page)

Station	Data	Day of month																														Monthly	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		..
Lakeside ..... (Osage Dam)	{ Evaporation .....	.079	.003	****	.135	.151	.030	.110	.144	.165	.033	.024	.081	.178	.264	.335	.375	.255	.264	.180	.220	.453	....	177	.225	.324	.286	.154	.223	.149	.222	...	5.420
	{ Mean temperature ..	32	28	32	42	51	38	37	48	47	48	52	59	64	72	67	54	48	46	55	66	49	46	51	57	66	65	66	68	70	76	...	53.3
	{ Wind movement ..	85	100	130	86	133	114	91	67	83	51	36	51	56	59	71	128	89	93	68	50	169	70	58	65	85	94	66	106	53	54	..	2.451

\*\*\*\* Evaporation included in next measurement.

Observations taken at 7.30 a. m. Wind movement corrected to true velocities. For description see April 1932 report.

*Continued from page 16*

Frosts.—Light, 7th, 8th, 12th, 16th, 17th, 18th, 19th, 21st, 22d, 23d; heavy, 7th, 17th, 18th, 19th, 22d; killing, 1st, 2d, 3d, 4th, 6th, 7th, 8th, 16th, 17th, 18th, 19th, 22d, 23d.

Fog.—Dense, 1st, 5th, 28th, 30th.

Glaze.—1st.

Hail.—Light—1st, at Fredericktown, Springfield, Willow Springs; 2d, at Dean, Hannibal, Marble Hill, Mountain Grove, Seymour; 5th, at Brunswick, Clifton Hill, Dexter, Doniphan, Kansas City; 11th, at St. Louis University; 27th, at Brunswick; 28th, at St. Joseph; 29th, at Amity and Tarkio. Moderate—1st, at Jackson; 5th, at New Madrid. Heavy—5th, in south part of Ripley County, with some damage to oats, lespeze and roofs; stones from 3 to 9 inches in circumference; 23th, at Maryville and northern part of Nodaway County, with

some damage to gardens, roofs and window glass; stones about size of walnuts, collected 2 inches deep some places at Maryville.

Halos.—Solar, 8th, 11th, 14th, 15th, 16th, 21st, 25th, 29th; lunar, 2d, 3d, 6th, 30th.

Sleet.—1st, 2d, 3d, 4th, 5th, 9th.

Smoke.—Dense, 10th.

Thunderstorms.—Local, 2d, 4th, 6th, 11th, 13th, 15th, 20th, 21st, 25th, 26th, 30th; more or less general, 1st, 5th, 14th, 27th, 28th, 29th.

Windstorms.—14th, at Jackson, no damage; 28th, in northern part of Nodaway County, with minor damage to communication lines, roofs and buildings.

**ERRATA**

March 1936, page 12: Greatest precipitation in 24 hours for the Southeastern Division should be 1.49 instead of 1.62.



## Daily Temperatures for April 1936

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	..	Mean	
Northern Division																																	
Brunswick .....	Maximum...	42	38	41	63	61	46	50	69	67	60	70	78	82	89	81	70	64	60	76	88	82	59	66	74	80	74	76	74	81	88	..	68.3
.....	Minimum...	29	21	16	33	35	24	24	31	46	46	42	38	42	63	51	41	36	33	32	51	42	32	38	44	54	48	47	58	59	65	..	40.7
Chillicothe §§.....	Maximum...	31	30	42	65	36	48	44	73	63	61	70	81	83	87	81	71	59	74	77	91	52	53	67	75	72	68	71	74	78	87	..	65.5
.....	Minimum...	21	20	13	18	34	20	21	22	38	45	43	39	42	57	48	36	31	30	30	49	38	29	36	42	52	47	45	48	55	63	..	37.1
Columbia .....	Maximum...	36	30	36	59	53	45	40	66	55	53	67	74	80	88	81	61	58	57	73	87	72	57	65	74	80	57	82	77	82	90	..	64.5
.....	Minimum...	27	23	18	35	33	26	26	32	43	44	46	37	48	63	49	42	35	33	37	55	41	33	38	46	54	50	49	59	60	65	..	41.6
Fayette .....	Maximum...	37	32	42	61	54	42	43	69	60	55	69	78	83	89	81	68	59	60	77	87	81	77	69	74	81	66	82	79	87	91	..	67.8
.....	Minimum...	29	21	16	31	35	25	25	28	43	44	39	34	39	59	49	39	35	31	28	43	41	28	32	44	46	48	48	55	55	61	..	38.4
Grant City .....	Maximum...	31	25	37	59	59	42	42	75	76	59	65	77	82	79	70	57	55	58	67	87	68	51	64	72	70	58	57	68	69	78	..	61.9
.....	Minimum...	23	18	10	31	32	17	17	29	38	43	42	41	42	57	49	35	31	26	34	52	34	30	37	45	45	46	45	46	50	61	..	36.9
Hannibal .....	Maximum...	36	31	36	49	48	42	39	65	59	53	68	62	74	86	80	63	54	56	70	87	81	55	60	67	77	67	75	74	80	87	..	62.7
.....	Minimum...	29	22	15	29	35	26	23	27	40	41	43	42	42	59	47	39	36	31	36	51	37	31	33	42	53	49	46	58	58	58	..	39.3
Kansas City .....	Maximum...	35	28	44	73	61	47	46	71	61	62	70	82	88	86	81	63	62	63	79	87	52	57	71	78	77	58	73	80	79	91	..	66.5
.....	Minimum...	24	20	16	38	32	23	24	38	48	45	46	44	46	62	52	40	36	38	36	52	41	35	41	50	56	48	48	58	57	70	..	42.1
Kidder .....	Maximum...	30	28	37	68	57	46	42	71	60	59	69	79	81	82	79	62	59	59	76	90	77	54	66	74	74	60	68	74	75	86	..	64.7
.....	Minimum...	18	17	10	29	32	17	18	29	40	43	41	42	45	58	40	34	30	28	37	49	35	27	34	42	49	44	43	50	53	60	..	36.5
Kirksville .....	Maximum...	35	30	35	57	49	46	39	69	64	57	69	70	78	84	79	62	56	60	74	89	82	59	65	70	75	61	70	75	73	87	..	64.0
.....	Minimum...	26	20	11	27	32	20	20	25	40	41	42	40	44	60	47	38	34	29	36	50	36	28	34	40	49	47	45	55	58	60	..	37.8
Louisiana .....	Maximum...	37	35	40	50	50	40	60	60	60	58	60	69	76	85	76	60	53	53	76	87	57	50	50	67	62	57	85	76	80	84	..	61.4
.....	Minimum...	33	25	18	25	38	25	24	40	45	39	39	60	42	40	38	27	26	38	37	24	27	36	50	50	44	56	60	60	60	..	38.2	
Macon §§.....	Maximum...	31	27	39	59	39	47	40	68	59	52	70	71	80	87	80	61	57	60	74	88	53	57	65	71	79	54	77	75	80	88	..	62.9
.....	Minimum...	24	20	13	15	34	21	21	21	34	41	42	41	44	52	45	38	33	29	35	51	39	28	30	40	46	48	45	47	57	62	..	36.7
Maryville .....	Maximum...	31	26	38	63	56	46	44	75	68	61	68	76	83	80	75	60	58	59	78	87	65	54	66	74	69	56	55	73	70	85	..	63.3
.....	Minimum...	22	18	9	31	31	14	16	30	37	41	38	46	47	54	51	33	31	28	36	48	32	29	36	45	45	45	43	53	61	..	36.5	
Mexico §§.....	Maximum...	34	30	41	63	45	45	41	66	58	55	68	73	81	89	83	62	59	58	74	89	53	57	65	73	83	53	81	76	82	90	..	63.9
.....	Minimum...	24	21	16	17	32	24	24	24	30	42	43	37	40	49	49	38	35	30	30	46	39	27	33	40	46	47	46	51	56	60	..	36.5
Oregon .....	Maximum...	35	28	41	68	56	47	44	75	66	62	71	82	87	83	77	63	62	62	79	83	65	58	70	78	73	55	61	79	72	88	..	65.8
.....	Minimum...	23	18	12	34	32	17	18	34	41	42	41	49	49	60	50	38	33	32	40	53	34	31	38	46	50	45	45	49	53	64	..	39.0
St. Joseph .....	Maximum...	32	26	40	68	46	47	44	74	63	63	70	81	87	85	79	63	61	62	78	87	53	56	69	76	74	54	63	78	76	90	..	64.8
.....	Minimum...	22	18	13	36	29	19	21	35	46	44	48	50	61	50	40	33	36	40	47	37	34	39	47	54	47	46	54	55	56	..	40.6	
Trenton .....	Maximum...	45	30	40	62	58	49	48	73	70	64	71	79	81	83	80	65	59	62	78	90	80	58	68	73	76	62	65	75	77	86	..	66.9
.....	Minimum...	24	20	13	30	32	19	20	28	41	44	42	45	42	46	46	38	33	29	30	48	37	28	37	42	51	48	52	58	63	..	38.4	
Unionville §§.....	Maximum...	31	30	35	60	34	45	39	69	63	54	67	72	82	81	77	59	56	59	74	89	52	55	66	72	72	55	65	74	76	87	..	61.7
.....	Minimum...	19	19	10	12	20	18	17	19	32	41	42	40	43	47	47	55	32	27	34	41	34	27	34	41	47	36	45	46	51	59	..	33.8
Warrenton .....	Maximum...	38	38	38	52	62	44	43	61	61	55	65	67	78	87	84	74	58	57	70	87	84	64	62	70	81	79	82	75	83	87	..	65.5
.....	Minimum...	32	23	17	30	39	28	26	27	37	41	43	42	45	60	54	37	35	32	38	53	36	29	38	40	48	47	46	56	58	61	..	39.8
Southwestern Division																																	
Appleton City .....	Maximum...	38	32	42	68	61	46	45	67	58	60	71	86	85	92	85	70	..	70	77	85	78	59	70	76	85	78	80	79	85	88	..	69.5
.....	Minimum...	24	18	16	30	32	26	28	36	43	45	42	44	49	63	59	42	..	41	34	37	42	32	35	42	49	52	51	56	58	66	..	41.1
Clinton .....	Maximum...	37	33	40	67	63	48	48	66	70	60	73	88	88	92	82	72	66	66	80	87	75	60	70	78	88	75	80	80	85	88	..	70.2
.....	Minimum...	30	20	18	35	36	26	28	38	42	45	42	42	52	60	58	52	35	37	34	52	42	32	35	41	50	53	50	52	58	63	..	41.9
Eldon §§.....	Maximum...	33	33	41	60	50	44	42	65	54	55	67	81	83	90	84	72	60	59	74	85	55	58	66	74	82	68	84	77	83	89	..	65.6
.....	Minimum...	24	23	18	18	35	27	27	29	31	40	43	40	44	48	37	40	43	33	34	42												





731  
21 Mo.  
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No. 5

# CLIMATOLOGICAL DATA

19

## MISSOURI SECTION

ROSCOE NUNN  
ST. LOUIS, MO.

VOL. XL

MAY 1936

No. 5

PRICE: 5 CENTS A COPY; 50 CENTS A YEAR

### GENERAL SUMMARY

Only three Mays in the last 49 years were warmer than May 1936. These were in 1896, 1902, and 1934. None of the three averaged more than approximately one degree warmer than May 1936, the highest average being 70.1° in 1896 as compared with 68.8° in 1936. But there were no extremely high temperatures during the month; it was the day-after-day persistence of moderately high readings that gave the unusually high average. Cool days occurred only on the 2-3d, 13-15th, and 29-30th. As compared with the very cool May of 1935, this month was 8.5° warmer.

Rainfall average for the State was unusually low, but lower State averages in May have occurred seven times in the last 49 years. The average for the State, 2.52 inches, is a little more than half the normal for May. It is in striking contrast with May 1935 rainfall, which was 8.46 inches. The rainfall was very unevenly distributed over the State, with largest amounts in the northwestern quarter and smallest in a wide belt extending from St. Louis and Warren counties southward to the southern border. Over an area comprising several counties in the extreme northwest the total was more than 5.00 inches, up to 7.10 inches at Oregon, Holt County. In the driest section, comprising about 25 counties to the southward and southward of St. Louis the average rainfall was less than 1.25 inches, and as low as 0.60 inch at Fredericktown. In other sections the rainfall was "spotted", varying from 2 to 4 inches in the southwestern counties and from less than 2 to more than 3 in the northeastern quarter.

For the five months, January to May, inclusive, the State average rainfall was 8.75 inches, whereas, the normal for the five months is 16.31 inches. This shows that only 54 per cent of normal rainfall was received. The good rains of May in the northwestern quarter, and in some other comparatively small areas, kept the moisture situation fairly satisfactory in about one-half of the State. The other half was badly in need of rain at the end of May, with greatest need in the counties to the southward and westward of St. Louis above mentioned.

Crop conditions varied approximately in accordance with the variations in moisture conditions. Wheat and corn were good to excellent at the end of May in most of the northwestern quarter and in some other areas, especially in bottom lands, while in about one-third of the State wheat was poor to fair and corn was starting off well, but, with immediate need of rain. Oats generally were only fair, but good in spots. The weather was mostly favorable for field work, which was well up at the end of May.

### TEMPERATURE

The monthly mean temperature for the State, 70 stations reporting, was 68.8°, or 4.4° above normal. The highest monthly mean was 73.3° at Caruthersville, and the lowest monthly mean was 65.8° at Greenville. The highest temperature recorded was 95° at Louisiana on the 17th, St. Charles on 27th, Clinton on 31st, Crystal City on 26th, and Jackson on 25th and 26th, and the lowest was 32° at Unionville on the 3d and Goodland on the 15th. The greatest daily range was 48° at Goodland on the 4th.

### PRECIPITATION

The average precipitation for the State, 123 stations reporting, was 2.52 inches, or 2.25 inches less than normal. The greatest local monthly amount was 7.10 inches at Oregon, and the least local monthly amount was 0.60 inch at Fredericktown. The greatest amount in any twenty-four hours was 2.33 inches at Macon on the 2d. The average number of days with 0.01 inch (Continued on page 24)

### PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind			Relative humidity			Percentage of sunshine	
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	7 a. m.	12 noon		7 p. m.
Columbia.....	30.03	30.38	14	29.58	31	7.7	22	s.	6	74	46	53	74
Kansas City.....	29.99	30.36	14	29.55	31	9.2	34	sw.	6	76	46	56	71
St. Joseph.....	29.99	30.35	14	29.51	31	8.1	38	nw.	1	78	53	58	70
St. Louis.....	30.04	30.39	14	29.63	31	11.7	43	sw.	9	68	47	49	76
Springfield.....	30.02	30.33	14	29.66	31	9.1	26	sw.	1	76	51	51	69
Cairo, Ill.....	30.04	30.34	22	29.70	31	7.6	40	sw.	12	64	77	76	87
Keokuk, Iowa..	30.02	30.43	14	29.57	31	7.5	21	sw.	6	64	49	51	74

### COMPARATIVE DATA FOR MAY

Year	Temperature			Precipitation				Number of days				
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy
1888.....	62.1	93	30	4.98	6.23	4.73	3.98	.....	5	..	..	..
1889.....	63.5	100	28	6.06	7.41	6.91	3.87	.....	5	..	..	..
1890.....	62.8	97	26	3.65	2.91	4.62	3.43	.....	6	..	..	..
1891.....	61.5	97	27	4.11	4.84	3.87	3.62	0	6	..	..	..
1892.....	60.7	91	28	9.04	8.72	10.11	8.28	0	17	5	0	17
1893.....	61.8	94	30	6.14	5.74	6.11	6.56	0	10	11	11	9
1894.....	63.7	96	29	4.31	2.60	5.18	5.14	0	8	13	11	7
1895.....	64.6	103	28	3.95	4.01	5.45	2.40	0	9	13	12	6
1896.....	70.1	96	37	9.17	9.00	10.29	8.22	0	12	12	12	7
1897.....	62.4	93	28	2.60	2.64	2.68	2.47	0	7	16	11	4
1898.....	65.2	97	31	7.68	8.36	7.81	6.88	0	14	12	10	9
1899.....	66.9	96	34	6.07	7.01	5.89	5.31	0	2	10	13	8
1900.....	66.3	97	29	3.63	3.80	3.00	4.09	0	10	14	11	6
1901.....	63.8	98	30	1.47	1.55	1.43	1.42	0	6	15	10	6
1902.....	69.4	98	39	4.82	5.31	5.65	3.51	0	11	13	11	7
1903.....	65.1	92	23	7.05	7.01	8.21	5.93	0	15	9	10	12
1904.....	63.1	95	32	4.74	5.46	5.40	3.35	0	12	13	10	8
1905.....	64.9	94	34	5.33	4.20	6.62	5.17	0	10	12	11	8
1906.....	66.3	98	27	2.45	2.68	3.02	2.25	0	7	15	10	6
1907.....	59.5	91	17	5.61	3.64	5.92	7.27	0.8	10	14	6	11
1908.....	66.1	96	24	6.91	8.16	6.77	5.79	0	12	12	10	9
1909.....	63.3	96	25	5.55	5.19	6.22	5.25	T.	9	15	9	..
1910.....	60.1	94	32	6.38	7.46	7.42	4.25	0	13	11	8	12
1911.....	68.8	101	27	1.46	2.45	1.10	0.84	0	5	19	7	5
1912.....	67.6	97	30	3.80	3.90	3.45	4.05	0	7	18	8	5
1913.....	65.8	101	33	2.79	3.82	3.16	1.40	0	8	16	7	8
1914.....	66.6	98	31	1.49	0.97	2.31	1.20	0	5	17	9	5
1915.....	63.7	97	30	7.72	8.34	8.11	6.70	0	12	12	7	12
1916.....	65.6	96	33	5.47	7.30	5.46	3.64	0	11	15	8	8
1917.....	58.7	91	30	4.28	4.14	5.38	3.32	0	10	15	7	9
1918.....	68.3	100	28	5.50	5.71	4.23	6.57	0	10	16	8	7
1919.....	62.0	93	35	5.74	5.65	5.96	5.61	0	13	10	10	11
1920.....	63.8	97	32	5.01	3.77	5.10	6.15	0	12	9	9	13
1921.....	66.4	102	28	3.68	3.80	3.68	3.55	0	7	17	8	6
1922.....	67.2	97	38	3.07	3.53	3.59	2.09	0	10	14	10	7
1923.....	62.7	97	25	4.68	2.45	4.40	7.18	T.	12	11	10	10
1924.....	58.6	96	31	4.71	3.18	5.13	5.83	0	10	13	8	10
1925.....	61.2	98	24	2.10	2.32	2.39	1.60	0	7	14	9	8
1926.....	67.0	100	29	2.78	2.42	3.34	2.58	0	7	16	9	6
1927.....	64.6	94	34	6.95	4.55	6.77	9.54	0	12	11	10	10
1928.....	65.8	95	29	2.87	2.05	3.16	3.41	0	8	16	9	6
1929.....	61.7	95	28	7.76	5.30	9.66	8.31	0.3	13	9	10	12
1930.....	64.7	95	33	3.33	3.22	3.78	2.98	0	9	16	8	7
1931.....	61.0	96	29	4.50	4.84	4.64	4.03	0	10	15	6	10
1932.....	66.1	98	31	1.80	2.44	2.03	0.93	0	6	18	9	4
1933.....	65.9	96	35	7.75	6.44	8.07	8.74	0	13	11	9	11
1934.....	69.0	110	31	1.93	1.82	2.42	1.56	0	5	21	7	3
1935.....	60.3	92	32	8.46	9.73	7.99	7.66	0	17	6	8	17
1936.....	68.8	95	32	2.62	3.07	2.95	1.54	0	7	17	10	4
Period.....	64.4	110	17	4.77	4.70	5.13	4.48	T.	9	14	9	8



## Climatological Data for May 1936

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches				Number of days				Prevailing direction of wind	Observers	
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelting	With precip., .01 inch or more	Clear	Partly cloudy			Cloudy
Northern Division																				
Bethany	Harrison	916	41	66.6	+ 4.1	87	16†	40	3	33	4.76	+0.59	1.90	0	10	19	6	6	se.	A. S. Cumming
Brunswick	Chariton	652	55	70.2	+ 6.0	91	31	44	3	35	2.12	-2.49	0.74	0	9	15	9	7	se.	O. K. Beuecke
Chillicothe	Livingston	779	27	67.8	+ 2.6	91	31	41	3	36	2.59	-1.50	0.68	0	10	21	6	4	sw.	Wm. J. Olenhouse
Clifton Hill	Randolph	731	37	69.0	+ 5.4	92	31	44	3	38	2.41	-1.99	0.63	0	10	17	10	4	s.	Dr. A. J. Bradsher
Columbia	Boone	740	46	69.7	+ 5.4	89	31	47	3	35	2.88	-1.58	0.86	0	8	17	12	2	s.	U. S. Weather Bureau
Conception	Nodaway	980	47	67.6	+ 5.5	90	31	41	3	30	4.98	+0.92	1.35	0	11	8	17	6	se.	Fr. Adelhelm Hess
Downing	Schuyler	876	15	67.2 <sup>a</sup>	+ 4.5	88	17†	41	14	37	2.05	-3.11	0.67	0	10	20 <sup>b</sup>	5 <sup>a</sup>	5 <sup>a</sup>	s.	James Taylor
Edgerton	Platte	856	16	67.8 <sup>a</sup>	+ 4.8	89	31	37	3	37	4.41	+0.21	1.92	0	10	18	6	7	s.	Fred L. Stiff
Elsberry	Lincoln	449	5	68.0	.....	90	1†	37	15	47	2.60	.....	0.85	0	8	13	15	3	sw.	Ray E. Mills
Fayette	Howard	680	56	69.0	+ 5.2	93	31	43	2	43	3.77	-0.55	1.32	0	7	12	13	6	s.	Harry P. Mason
Fulton	Callaway	818	48	69.1	+ 4.5	90	1†	40	4	45	3.05	-1.55	1.30	0	8	20	10	1	s.	Clyde C. Herring
Gorin	Scotland	700	49	.....	.....	.....	.....	.....	.....	.....	1.43	-3.14	0.55	0	7	18	8	5	se.	W. L. Harker
Grant City	Worth	1,134	32	66.6	+ 4.6	87	30†	38	3	31	2.82	-1.41	1.22	0	9	9	15	7	se.	Howard Rybolt
Hannibal	Marion	759	44	68.7	+ 5.1	89	31	46	4†	36	1.86	-2.49	0.88	0	9	12	10	9	se.	Hannibal Water Dept.
Kansas City	Jackson	741	47	70.9	+ 6.1	90	31	44	3	32	4.16	-0.49	1.10	0	10	8	14	9	sw.	U. S. Weather Bureau
Kidder	Caldwell	1,020	44	66.6	+ 4.0	87	31	41	3	33	4.89	+0.24	1.41	0	11	14	14	3	n.	Roscoe L. Terry
King City	Gentry	1,095	10	.....	.....	.....	.....	.....	.....	.....	4.93	+0.72	1.64	0	9	8	17	6	se.	John M. Martin
Kirksville	Adair	969	47	68.2	+ 5.9	90	31	41	14	37	2.60	-2.73	0.85	0	8	18	7	6	s.	Prof. J. S. Stokes
Linn	Linn	816	4	.....	.....	.....	.....	.....	.....	.....	2.02	.....	0.54	0	10	17	8	6	e.	J. Robert Hall
Louisiana	Pike	469	42	68.2	+ 4.5	95	17	38	4†	45	3.45	-1.25	1.25	0	7	20	9	2	s.	Stark Bro's Nurseries
Macon	Macon	875	37	68.4	+ 4.9	92	31	43	14	37	3.33	-1.26	2.33	0	9	11	14	6	w.	W. C. Brown
Maryville	Nodaway	1,169	46	67.3	+ 6.0	89	31	38	3	31	5.07	+0.42	1.59	0	9	12	5	14	se.	R. B. Montgomery
Mexico	Andrew	800	47	68.8	+ 4.8	91	31	44	14	39	2.37	-2.23	1.09	0	9	20	1	10	se.	Mrs. Abbie Snoddy
Monroe City	Monroe	748	15	.....	.....	.....	.....	.....	.....	.....	2.83	-1.57	1.06	0	8	21	4	6	n.	J. S. Conway
Oregon	Holt	1,048	80	68.6	+ 5.4	89	22	42	3	32	7.10	+2.57	2.21	0	9	18	9	4	se.	Miss Mina Wright
St. Charles	St. Charles	520	48	71.0	+ 7.9	95	27	43	15	40	0.77	-3.51	0.45	0	6	22	7	2	se.	Martin L. Comann
St. Joseph	Buchanan	957	26	69.2	+ 5.2	89	31	43	3	30	4.14	-0.10	1.22	0	12	16	9	6	s.	U. S. Weather Bureau
Shelbina	Shelby	779	43	.....	.....	.....	.....	.....	.....	.....	3.66	-0.66	1.43	0	9	.....	.....	.....	.....	J. C. Jewett
Steffenville	Lewis	650	38	68.4	+ 4.6	92	31	44	14	36	2.16	-2.41	1.10	0	8	16	12	3	s.	Frank Hall
Tarkio	Atchison	916	33	66.7	+ 4.1	87	30	41	8	31	5.36	+0.82	1.43	0	8	11	12	8	sw.	Albert Volker
Trenton	Grundy	822	40	68.7	+ 5.2	91	31	41	3	35	3.56	-1.14	1.06	0	9	13	13	5	se.	W. H. Estes
Unionville	Putnam	1,062	43	67.6	+ 5.5	90	31	32	3	39	2.70	-2.55	0.94	0	8	14	7	10	s	John H. Schick
Warrenton	Warren	816	54	69.4	+ 4.5	89	31	46	14	32	1.77	-2.63	0.84	0	5	11	17	3	sw.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.	574	65	68.7	+ 4.9	90	31	46	14	33	2.76	-1.17	1.47	0	5	10	11	10	s.	U. S. Weather Bureau
Division means and extremes				68.4	+ 5.0	95	17†	32	3	47	3.07	-1.63	2.33	0	9	15	10	6	s.	
Southwestern Division																				
Appleton City	St. Clair	853	41	70.1	+ 5.1	90	31	45	3	36	3.04	-1.76	0.94	0	9	15	8	8	sw.	Rolla Brown
Buffalo	Dallas	1,200	6	.....	.....	.....	.....	.....	.....	.....	4.47	.....	2.19	0	6	21	8	2	.....	C. M. McCallister
Caplinger Mills	Cedar	750	10	.....	.....	.....	.....	.....	.....	.....	2.62	-2.25	0.84	0	8	23	2	6	se.	Ozark Utilities Co.
Clinton	Henry	765	43	70.6	+ 5.1	95	31	45	3	40	2.42	-2.41	0.53	0	9	12	19	0	sw.	A. E. Dervent, M. D.
Concordia	Lafayette	784	21	.....	.....	.....	.....	.....	.....	.....	2.89	-1.86	.....	0	9	.....	.....	.....	.....	Mrs. W. H. Stratman
Dean H.	McDonald	1,000	32	67.0	+ 1.3	89	21†	40	19	43	2.90	-2.85	0.86	0	8	12	14	5	e.	H. E. Dean
Eldon	Miller	934	41	68.8	+ 4.6	91	31	43	15	40	1.98	-2.32	0.62	0	7	8	20	3	s.	E. H. Shepherd
Garber	Taney	950	1	67.2	.....	91	31	40	4	45	3.14	.....	0.87	0	8	6	15	10	e.	William H. Durham
Hailey	Barry	1,350	11	.....	.....	.....	.....	.....	.....	.....	4.47	-0.77	2.00	0	8	17	9	5	se.	A. W. Madison
Harrisonville	Cass	904	58	67.8	+ 4.0	89	31	41	3	44	3.16	-1.27	1.08	0	10	14	7	10	sw.	John H. Patterson
Jefferson City	Cole	557	46	69.2	+ 4.5	91	31	44	4†	41	3.49	-0.92	1.70	0	7	20	6	5	sw.	Mrs. Frank Kliegel
Lamar	Barton	980	48	69.5	+ 3.9	92	31	46	3	34	2.08	-3.18	1.30	0	7	20	9	2	sw.	Jesse A. Mann
Lamonte	Pettis	867	35	68.6	+ 4.0	92	31	43	3	38	3.07	-1.78	0.70	0	9	20	6	5	s.	J. E. Wheeler
Lebanon	Laclede	1,265	48	66.7	+ 1.8	86	6†	42	3†	34	4.34	-0.87	2.00	0	4	25	4	2	s.	Mrs. Lou Mulcare
Lexington	Lafayette	688	51	70.6	+ 6.2	92	27†	46	3	39	3.86	-1.10	1.51	0	10	17	10	4	se.	Miss Carrie Loomis
Lockwood	Dade	1,078	30	70.0	+ 5.6	89	31	46	3	30	2.51	-2.81	1.02	0	6	16	15	0	sw.	Hubert A. Nieman
Marshall	Saline	779	49	68.7	+ 4.5	89	31	44	3†	40	2.18	-2.43	0.77	0	8	18	13	0	sw.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	35	67.8	+ 4.0	92	31	44	3†	45	1.67	-2.79	0.62	0	6	21	9	1	s.	Mo. Fruit Exp. Sta.
Neosho	Newton	1,011	49	67.0	+ 1.0	87	6	42	3	42	2.74	-2.82	1.28	0	9	21	9	1	se.	U. S. Fisheries Sta.
Nevada	Vernon	862	43	70.0	+ 5.5	90	31	44	3	33	2.83	-2.10	0.74	0	6	15	10	6	sw.	George A. Kaupp
Seligman	Barry	1,542	35	67.7 <sup>a</sup>	+ 3.2	85	31	46	3	32	3.98	-1.46	1.37	0	5	17 <sup>a</sup>	10 <sup>a</sup>	3 <sup>a</sup>	se.	Floyd E. Fawver
Seymour(near)	Webster	1,642	30	66.4	+ 2.7	86	31	40	4	40	2.52	-2.31	0.78	0	7	12	18	1	s.	A. L. Hailey
Springfield	Greene	1,301	48	69.0	+ 4.5	86	31	48	3	28	2.37	-2.82	0.67	0	10	13	14	4	s.	U. S. Weather Bureau
Versailles	Morgan	1,037	4	70.3	.....	90	6†	42	3†	39	2.79	-2.91	0.56	0	8	15	11	5	sw.	I. M. Wilson
Warrensburg	Johnson	878	49	68.3	+ 3.3	92	31	39	14	33	2.98	-1.74	0.82	0	9	15	6	10	se.	E. A. Markey
Warsaw	Benton	637	35	70.4	+ 4.9	94	31	42	3	38	2.98	-2.02	0.68	0	7	16	11	4	sw.	Everett Martin
Division means and extremes				68.7	+ 4.0	95	31	39	14	45	2.95	-2.18	2.19	0	8	16	11	4	sw.	
Southeastern Division																				
Arcadia	Iron	926	55	66.6	+ 2.5	91	1	35	15	43	0.76	-3.48	0.33	0	4	21	6	4	e.	Arcadia College
Birch Tree(near)	Shannon	1,000	41	68.0	+ 3.0	89	31	39	15	39	1.16	-3.19	0.55	0	3	26	3	2	sw.	V. H. Kirkendall
Campbell	Dunklin	314	10	71.1 <sup>†</sup>	+ 3.8	91	24	.....	.....	.....	2.10	-2.91	0.75	0	5	25	4	2		



## Daily Precipitation for May 1936

Stations	Drainage-basins	Day of month																															Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Northern Division																																		
Amity	Grand	.41	1.15		T.					.73	.16	.01	.09	.47						.02					.54	1.07	.48	.02					.06	5.21
Bethany	do	1.61	.29							.22	.06	.04	1.24					.22						.14	.33	.61								4.76
Bowling Green	Mississippi		.38							.23	.25														.37	.42	.02							2.62
Brunswick	Grand	.74								.06	.10		.02	.14					.58							.25	.10	.08						2.12
Canton	Mississippi	.12								.12	.02			.38					.25							.47								2.14
Chillicothe	Grand	.17	.68							.12	.32		.07	.42					.03							.27	.28	.02						2.59
Clifton Hill	Chariton	.47	.47							.09	.10	.02							.24						T.	.27	.28	.02						2.41
Columbia	Missouri	.37	.02							.25	.54	T.							.63					.02	.28	.25	.08							2.88
Conception	do	1.35			T.	T.				.78	.42	.09	.46	.25				T.	.86						.03	.46	.57	.06						2.41
Downing	Mississippi	.30	.37							.13	.37		.32	.02				.14							.03	.46	.57	.06						4.98
Edgerton	Missouri	1.92	.09						T.	.81	.18		.28					.19							.17	.20	.03							2.05
Elina	Mississippi	.77								T.	.28	T.	.30						T.						.43	.34	.09					.08		4.41
Elsberry	do	.68			.85					.18	T.	.13							T.						.18									1.53
Farber	do	.47								.21	.16								.57						.40	.18	.09	.09						2.60
Fayette	Missouri	.81								.15	.20	T.							.98							.55								1.96
Fulton	do	.35								.06	.06	1.30							.98						.30	1.02	.31							3.77
Gallatin	Grand	1.42								.05	.77		.10	.54					.38							.28	.58	.04						3.05
Gorin	Mississippi	.10	.45		T.					.10	.32		.10					T.	.20						.50	.14	.40							5.12
Grant City	Grand	1.22						T.		.36	.10		.18						.34						.07	.38	.11	.06						1.43
Hannibal	Mississippi	.88	T.	.01						.06	.03	.31							.28							.13	.13	.03						2.82
Hermann	Missouri	.76								.30	.06	.03							1.28							.02	.02							1.86
Kahoka	Mississippi	1.05																							.02	.02								2.45
Kennett	Missouri	.78				T.	T.	.61	.04	.87	T.	.05	.08					.19							.99	.18	T.							1.65
Kidder	Grand	.12	.84						.08	1.00		.17	.09						.07							.72	1.41	.37	.02				.37	4.16
King City	Missouri	.97			T.				1.09	.41		.41							.07							.18	.81							4.89
Kirksville	Mississippi	.85	.59							.26		.29							.15					.01	.83	.18	.35	.02					.25	4.93
LaBelle	do	.96								.12	.08							.06							.18	.35	.02							2.60
Linneus	Grand	.21	.54		T.					.17			.06	.02					.98							.37								2.51
Lionsburg	Mississippi	.50							T.	.10	.50		.40						.08						.05	.45	.37	.07						2.02
Lucerne	Grand	.84							.75		.13	.24						1.25							.50	.20								3.45
Macon	Chariton	2.33							.05	.10	.11	.10	.30						.06						.05	.73	.19	.01						3.00
Madison	Mississippi	.87								.12	.18								.02						.19	.13								3.33
Maryville	Missouri	1.16							1.59	.28		1.17	.06						.17							.12	.83							2.29
Memphis	Mississippi	.69	T.	T.						.31	T.	.25							.24						T.	.16	.32	.09				T.		5.07
Mexico	do	.45							.20	.06	.20	.08							.09							.20	.27							1.72
Milant	Grand	.83							.03	.71		.45							1.09							.08	.16		.05					2.37
Monroe City	Mississippi	.11	.78						.15	.03		.09							1.06							.03	.44	.26		.05				2.75
New London	do	1.63										.12	.39	T.					.79						T.	.22	.39							2.83
Oregon	Missouri	1.58							.30	1.91	.23	.23							.70							.89	1.18							3.24
Palmyra	Mississippi	1.12	.04	.07						.05	.08	.16	.03						.96							.10	.35							7.10
Paris	do	.90							.17	.05	.32	.20							.59							.10	.35							2.51
Perry	do	.72								.20	.22	.13							.59							.10	.35							2.68
Philadelphia	do	2.05	.05							.20	.22	.13							.55							.25	.50	.06						2.63
St. Charles	Missouri	.45					.01			.09	.05	.02							.15							.10	.35							2.10
St. Joseph	do	.97			T.	T.	T.	.80	.50	.10	T.	.43	.04					.07						.01	.61	.56	.04					T.		0.77
Shelburne	Mississippi	1.43							.06	.07	.42	.12	.08					1.15							.13	.20	T.							4.14
Shelbyville	do	1.57								.35	.50								.15							.13	.20	T.						3.66
Steffenville	do	.36	1.10	.03						.08	T.	T.	.38	.50					.51						.07	.03	.14							2.71
Turkio	Missouri	1.40					.04	.79	1.43		.82								.51						.07	.03	.14							2.16
Trenton	Grand	1.06			.01				.75	.02	.69								.26							.46	.15	T.						5.36
Troy	Mississippi	.85								.45	.03	.05							.30						.16	.20								3.56
Unionville	Chariton	.94							.37	.04	.23								.02							.25			1.50					3.43
Warrenton	Mississippi	.84							.37	.08	.06								.42							.24	.77	.09						2.70
Keokuk, Ia.	do	1.47	T.						.14	.41	.62							T.								.12	T.							1.77
Southwestern Division																																		
Appleton City	Osage	.44				T.				.35	.94	.09	.37						.09							.39	.32							3.04
Boonville	Missouri	.64								.03	.06	.54	.01						.38							.48	.64	.02				T.	.05	2.84
Buffalo	Osage	2.19								.56		.78</																						



## Daily Precipitation for May 1936—Continued from preceding page

Stations	Drainage-basins	Day of month																															Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Southeastern Div.—Concluded																																	
Farmington	St. Francis	.28								.22	.09			.40					T														0.99
Fisk	do	.17										.15		.18					.21	.23												0.79	
Fredericktown	do	.13												.22						.10												0.60	
Goodland	Black	.40										.08	.12	.38																		0.98	
Greenville	St. Francis	.51									.36	.52	.15	.42					.11													2.07	
Jackson	Mississippi	.12							.17	.84	.40	.33	.37						.42													2.65	
Koshkonong	Black	.38								.11	.11	T	.23					T	.05													0.88	
Leeper	do	.21									.36	.21	.20						T	.22												1.20	
Marble Hill	Mississippi	.28							.39				.40	.35					.55													1.97	
Meramec Park	Meramec	.67								.30	.09								.22													1.28	
Morehouse	Mississippi	.37							.03	.35	.17	1.11	.20					.39	.48													3.10	
New Madrid	do	.15	.11								.10	.28	.48						.05	.85												2.02	
Owensville	Gasconade	.79	.11						T	T				T				.25	T													1.15	
Parma	St. Francis	.27									.20	.15	.67						.31													1.60	
Poplar Bluff	Black	.38									.16	.55	.14						.10	.66												1.99	
Rolla	Meramec	.90									.15		.05						.28													1.38	
St. Louis***	Mississippi	.24	T		.01				.03	.16	.04	.02	T					T	.35													0.85	
St. Louis University*	do	.23			T				.06	.41	.02	.01						.01	.32													1.06	
Salem	Meramec	1.01							.35	.03								.40														1.81	
Sikeston	Mississippi	.40								.40	.05	.26	.81	.01					.59	.94												2.87	
Union	Meramec	.66								.02	.12								.20	T						.02		.08				1.49	
Valley Park	do	.40			T					T	.17	.11							.20	T												0.88	
Williamsville	Black	.38									.06	.15	.96						.10													1.65	
Willow Sprgs. (near)	White	.48							.02	.05		.07	.40						.12	.05												1.19	
Cairo, Ill.***	Mississippi	.17							.02	.03	.15	.99	T					.10	.26													1.72	

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. || Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. T. Trace, or less than 0.01 inch.  
 \*\*\* Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. \*\* Precipitation in the next following measurement; separate dates of fall not recorded. \* Precipitation is for 24-hour period, midnight to midnight † Estimated. ‡ Partially estimated. |||| Incomplete.

Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for May 1936  
 (See precipitation data in table on preceding page)

Station	Data	Day of month																															Monthly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Lakeside .....	Evaporation .....	359	300	266	187	247	282	430	418	302	147	149	183	172	238	275	261	310	317	232	250	312	318	215	173	276	258	204	241	366	305	247	8,240
Osage Dam)	Mean temperature ..	78	61	58	64	70	77	78	72	69	66	66	61	58	62	70	68	71	64	66	69	74	72	74	72	72	74	74	74	66	66	72	69.0
	Wind movement ..	110	108	88	54	57	59	126	83	96	59	54	36	74	79	64	59	60	80	68	45	60	67	76	56	48	46	38	40	60	49	44	2,043

Observations taken at 7.30 a. m. Wind movement corrected to true velocities. For description see April 1932 report.

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or more of precipitation was 7. There was no snowfall reported anywhere in the State.

MISCELLANEOUS PHENOMENA

Dust.—Locally on 6th.

Frost.—Light, locally on 14th, 15th.

Fog.—Dense, 3d, 11th, 13th, 24th, 26th.

Hail.—Light—1st, at Lexington and Philadelphia, 9th at Oregon, 10th at Kansas City, 12th at Appleton City and vicinity of Cairo, Ill., 17th at Kansas City and Oregon, 18th at La-

monte and Lexington. Heavy—12th, at Essex, Morehouse, and southeast part of Stoddard County. At Essex and vicinity damage to crops was estimated at \$50,000 to \$225,000 with total loss reported to cotton, corn, and gardens.

Halos.—Solar, 1st, 2d, 6th, 7th, 8th, 11th, 18th, 19th, 21st, 22d, 26th; lunar, 4th, 26th.

Thunderstorms.—Local, 5th, 6th, 7th, 8th, 11th, 13th, 22d, 24th, 25th, 30th; more or less general, 1st, 2d, 9th, 10th, 12th, 17th, 18th, 23d.

Windstorms.—At Warrenton on 9th; limbs were blown off trees. On 12th at Morehouse and in the vicinity of Essex and the southeastern part of Stoddard County. Property damage estimated at \$25,000 to \$35,000 at Essex and vicinity.



## Daily Temperatures for May 1936

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
Northern Division																																		
Brunswick	Maximum	86	67	68	84	87	87	86	80	75	79	75	70	73	83	88	87	82	81	81	88	90	82	81	72	83	89	87	83	86	91	82.1		
	Minimum	63	59	44	50	60	68	66	63	63	60	58	61	55	47	50	53	58	62	50	51	59	66	69	65	60	58	61	59	58	51	60	58.2	
Chillicothe	Maximum	73	59	70	84	88	85	86	83	79	76	78	72	69	72	82	89	86	75	81	85	87	89	75	74	71	84	86	85	84	87	91	80.3	
	Minimum	59	46	41	50	57	68	62	62	61	57	53	49	54	44	49	53	58	58	47	51	59	65	68	62	58	52	53	55	57	52	58	55.4	
Columbia	Maximum	85	63	65	84	85	89	89	86	77	74	75	74	69	69	79	87	87	78	80	82	88	87	81	83	76	84	86	83	77	80	89	80.5	
	Minimum	63	52	47	49	62	69	66	64	65	60	58	57	54	48	49	59	59	58	50	59	57	68	67	65	61	63	67	63	55	53	58	58.9	
Fayette	Maximum	86	65	68	87	90	89	87	80	79	80	76	69	73	83	90	90	80	85	84	88	88	87	81	71	85	90	84	80	80	86	93	82.7	
	Minimum	64	52	43	44	57	61	63	60	63	58	52	59	50	45	44	55	51	60	46	48	53	64	63	64	57	59	61	59	54	49	54	55.2	
Grant City	Maximum	78	58	63	83	86	82	77	79	72	60	69	67	67	70	76	85	80	76	74	80	83	85	75	68	75	81	80	81	83	87	87	76.4	
	Minimum	55	41	38	53	73	68	64	62	58	55	51	57	52	46	52	60	62	56	60	66	66	60	66	66	60	57	53	61	58	58	56	58.8	
Hannibal	Maximum	83	78	60	82	86	88	88	87	79	74	77	76	67	67	77	85	87	82	79	83	85	87	85	78	69	84	84	82	74	79	89	80.0	
	Minimum	61	53	48	46	55	65	65	63	62	62	58	60	55	46	46	56	58	61	53	54	57	63	67	65	58	60	63	58	50	50	57	57.4	
Kansas City	Maximum	79	62	71	89	90	87	87	84	81	75	74	73	68	73	85	88	89	80	84	81	89	89	78	70	72	83	88	83	83	88	90	81.3	
	Minimum	51	48	41	57	68	70	72	62	58	57	59	55	49	58	64	64	60	52	63	61	72	67	63	62	58	63	66	60	60	65	60.5		
Kidder	Maximum	79	56	68	83	85	83	82	82	78	70	73	70	66	69	81	85	85	77	82	81	85	85	75	69	70	80	83	81	79	85	87	77.9	
	Minimum	51	42	41	50	59	66	62	59	59	58	50	55	53	43	48	57	59	58	51	53	56	64	63	69	70	80	80	83	81	79	85	87.7	
Kirksville	Maximum	81	65	67	83	81	86	86	85	79	77	78	74	67	70	78	87	87	81	84	81	86	88	81	73	73	83	85	84	82	85	90	80.4	
	Minimum	60	49	45	46	52	61	60	60	63	55	55	57	54	41	50	58	60	59	50	53	58	65	67	62	57	55	62	54	52	52	57	55.9	
Louisiana	Maximum	90	71	60	76	80	92	93	90	85	80	78	80	78	70	78	85	95	85	80	87	90	92	87	85	78	85	85	85	83	82	88	83.0	
	Minimum	65	55	45	38	52	62	60	60	57	58	58	60	50	42	38	55	60	60	42	42	54	60	64	60	60	60	60	50	42	42	46	53.5	
Macon	Maximum	80	59	65	84	87	87	86	78	79	77	75	69	69	80	88	88	80	84	84	86	88	84	76	70	87	81	84	83	87	92	80.8		
	Minimum	67	50	46	47	53	58	52	58	42	58	58	59	55	43	50	54	59	60	49	52	56	61	67	61	57	57	60	54	52	52	57	56.0	
Maryville	Maximum	76	66	69	83	85	82	80	88	76	72	72	68	61	70	79	85	80	76	81	84	81	87	74	67	74	82	82	81	83	87	89	78.2	
	Minimum	55	44	38	54	59	68	62	60	57	54	54	55	50	48	52	59	55	50	55	58	64	65	61	56	54	61	59	60	60	59	56.4		
Mexico	Maximum	85	65	63	84	89	90	89	87	88	87	87	87	74	77	76	70	80	87	90	79	81	83	87	89	84	74	80	88	84	78	82	91	81.4
	Minimum	67	53	47	45	55	64	63	61	63	60	56	60	54	41	45	57	56	60	50	53	53	62	65	61	58	58	60	54	48	49	55	56.1	
Oregon	Maximum	80	61	72	86	87	85	83	83	88	72	74	67	68	73	83	87	82	76	83	82	85	89	75	65	76	83	86	83	85	88	88	79.8	
	Minimum	50	43	42	56	63	69	64	60	56	54	53	55	51	49	56	61	62	57	52	58	61	69	63	59	56	57	61	59	60	62	62	57.5	
St. Joseph	Maximum	76	60	73	85	87	83	84	81	77	73	71	69	68	72	83	87	82	76	83	82	85	89	78	66	75	83	87	84	84	89	89	79.4	
	Minimum	51	47	43	56	67	70	67	61	59	56	54	57	55	52	55	64	64	60	54	60	60	69	65	59	58	57	62	64	60	61	63	59.0	
Trenton	Maximum	80	59	71	84	86	87	85	85	77	73	71	69	68	72	83	87	82	76	83	82	85	89	79	72	76	84	85	85	84	87	91	80.6	
	Minimum	59	46	41	50	56	67	63	61	61	56	53	60	54	46	49	56	60	60	50	53	60	65	67	72	76	84	81	85	86	84	59	56.8	
Unionville	Maximum	73	56	67	84	87	86	83	85	76	76	74	67	70	80	88	86	80	79	84	83	86	89	77	72	76	82	84	85	82	86	90	79.6	
	Minimum	62	46	32	45	52	55	65	60	61	56	56	57	53	46	49	56	62	57	50	55	58	63	66	62	58	56	61	56	56	59	55.7		
Warrenton	Maximum	87	84	61	79	86	85	85	83	87	76	74	77	74	68	76	84	86	83	80	82	86	87	83	86	79	86	88	85	79	80	89	81.3	
	Minimum	67	55	51	47	60	63	63	62	63	61	56	60	55	46	47	55	55	52	52	54	62	65	63	60	62	65	60	62	59	51	57	57.5	
Southwestern Division																																		
Appleton City	Maximum	85	72	72	85	88	88	88	85	81	76	74	71	71	72	82	85	87	82	83	83	87	88	87	86	85	86	86	85	82	88	90	82.6	
	Minimum	66	49	45	49	57	66	63	63	62	58	50	57	54	47	48	54	53	62	51	51	53	65	64	64	60	61	63	77	56	55	61	57.6	
Clinton	Maximum	83	73	74	87	80	88	88	86	80	73	78	73	71	73	82	88	90	83	83	84	90	90	90	83	83	85	90	90	90	92	91	95	83.4
	Minimum	68	58	45	47	60	65	65	63	62	58	57	57	52	47	46	54	54	53	49	51	53	63	64	65	60	60	63	64	57	60	61	57.8	
Eldon	Maximum	87	63	69	85	87	89	89	88	87	78	70	75	73	69	80	86	87	79	82	82	87	86	80	87	86	90	87	81	84	84	91	82.4	
	Minimum	66	50	44	45	48	62	64	64	62	60	54	54	55	44	43	47	52																





## CLIMATOLOGICAL DATA

19

## MISSOURI SECTION

ROSCOE NUNN  
ST. LOUIS, MO.

Vol. XL

JUNE 1936

No. 6

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## GENERAL SUMMARY

June temperatures followed somewhat the trend set in the preceding month, that is, to high readings. Very warm days fell on the 1st, 6th to 9th, 15th to 20th, and 26th to 29th. On the 19th and 20th record-breaking maximum readings for June occurred at several stations. But there were also some cool days, principally on the 3d, 4th, 11th, 12th, 13th, 22d, and 23d. While by no means an outstanding hot June, the average temperature was decidedly above normal, and in great contrast with the cool June of 1935. For extreme maximum reading, this month equaled the record highest, viz., 112°. This occurred at Doniphan on the 20th. The only previous occurrence of 112° in June in Missouri was in June 1911.

Rainfall for the State as a whole was slightly less this month than ever before recorded in June (years 1888 to 1936 inclusive), the average being 1.42 inches, whereas the least June average in past years was 1.47 inches in 1933. The amounts for the three State Divisions were as follows: Northern, 1.30 inches; Southwestern, 1.38; Southeastern, 1.57. A chart of the rainfall distribution over the State shows considerable irregularities. The driest area embraced a number of central counties bordering, or near, the Missouri River, in a wide belt extending from Chariton, Lafayette, and Johnson counties eastward to St. Charles and Franklin counties, in which the total rainfall for the month was generally less than 0.25 inch, and as low as 0.07 inch at Waverly and 0.08 inch at Fulton. In a few spots in other parts of the State the totals were comparatively heavy; for example, Buchanan County, Vernon County, Dent County, and St. Louis City.

The drought was becoming severe by the end of June. The total rainfall, January 1 to June 30, was 10.17 inches, or 49 per cent of normal, the normal being 20.92 inches. For the same period in 1934 (great drought year) the rainfall was 12.02 inches, or 1.85 inches more than in 1936. From April 1 to June 30 the rainfall in 1934 was 7.15 inches (54 per cent of normal) and in 1936 it was 6.39 inches (48 per cent of normal). Thus, on the whole, moisture deficiency was appreciably greater in 1936 than in 1934 at the end of June, considering the whole State.

Wheat turned out fairly good yields on the average, with some excellent yields both in quantity and quality in the principal wheat-growing areas. In some other sections the crop was poor. Oats ranged from very poor to very good, averaging only fair. Corn, at the end of June, was still good in about one-fourth of the State, with some excellent fields in the northwestern quarter and in some lowlands of other sections; but in about three-fourths of the State it was mostly only fair, as it was needing rain badly. Corn was well cultivated almost everywhere and was probably standing the drought better than usual on that account.

## TEMPERATURE

The monthly mean temperature for the State, 70 stations reporting, was 76.5°, or 2.9° above normal. The highest monthly mean was 81.6° at Caruthersville, and the lowest monthly mean was 72.0° at Grant City. The highest temperature recorded was 112° at Doniphan on the 20th, and the

lowest was 40° at Goodland on the 13th. The greatest daily range was 51° at Goodland on the 17th.

## PRECIPITATION

The average precipitation for the State, 123 stations reporting, was 1.42 inches, or 3.19 inches less than normal. The greatest local monthly amount was 4.86 inches at Salem, and the (Continued on page 29)

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind			Relative humidity			Percentage of sunshine	
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	7 a. m.	12 noon		7 p. m.
Columbia.....	29.90	30.19	23	29.30	1	8.4	27	sw.	1	62	39	42	78
Kansas City.....	29.88	30.21	23	29.23	1	10.2	34	sw.	1	62	36	36	88
St. Joseph.....	29.89	30.23	23	29.18	1	8.7	24	sw.	1	67	41	42	85
St. Louis.....	29.91	30.27	22	29.37	1	11.0	35	sw.	1	58	43	42	84
Springfield.....	29.91	30.19	24	29.42	1	9.5	37	nw.	10	65	43	42	90
Cairo, Ill.....	29.90	30.14	25	29.53	1	8.4	27	w.	7	72	44	45	88
Keokuk, Iowa..	29.92	30.27	22	29.27	2	7.7	28	nw.	9	64	40	39	78

## COMPARATIVE DATA FOR JUNE

Year	Temperature			Precipitation					Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average, for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy
1888.....	72.6	103	36	5.81	5.98	5.96	5.50	0	7	..	..	..
1889.....	70.7	100	38	4.66	4.29	4.57	5.13	0	6	..	..	..
1890.....	77.2	106	44	2.46	3.14	2.49	1.71	0	6	..	..	..
1891.....	73.2	103	46	6.56	5.61	7.99	6.08	0	13	..	..	..
1892.....	74.5	100	45	3.09	3.04	3.72	2.62	0	7	15	9	6
1893.....	72.6	98	40	4.72	4.92	3.91	5.32	0	9	12	12	6
1894.....	74.5	105	35	3.74	4.28	4.92	2.03	0	7	16	11	3
1895.....	73.3	100	42	5.87	6.07	6.33	5.20	0	10	12	11	7
1896.....	72.5	101	45	3.98	3.32	3.63	5.00	0	9	12	11	7
1897.....	73.6	102	38	6.25	6.49	5.74	6.51	0	12	9	14	7
1898.....	75.3	100	49	5.92	6.32	6.54	4.90	0	11	13	12	5
1899.....	74.3	101	42	3.52	3.71	4.83	3.21	0	9	15	10	5
1900.....	73.3	103	44	5.05	3.71	5.06	6.37	0	10	12	12	6
1901.....	77.9	106	40	2.02	2.67	1.47	1.92	0	6	18	10	2
1902.....	70.9	100	37	6.42	6.64	6.95	5.68	0	12	11	10	9
1903.....	67.3	95	36	3.28	2.96	3.78	3.09	0	9	15	9	6
1904.....	70.5	93	45	6.68	5.81	8.23	6.51	0	11	12	12	6
1905.....	75.2	103	42	3.14	2.84	3.06	3.52	0	7	15	10	5
1906.....	72.7	101	40	4.82	3.28	6.62	4.55	0	10	15	9	6
1907.....	71.2	97	40	5.47	5.76	6.40	4.24	0	11	14	10	6
1908.....	72.3	98	43	6.01	6.92	6.78	4.33	0	11	13	10	7
1909.....	73.9	98	48	5.23	5.96	5.78	3.95	0	11	11	13	6
1910.....	70.4	99	38	4.11	3.08	4.69	4.57	0	8	16	7	7
1911.....	78.9	112	43	1.76	0.93	1.59	2.77	0	6	18	8	4
1912.....	69.5	100	42	4.77	3.31	5.39	5.62	0	9	14	8	8
1913.....	75.4	107	33	2.55	3.01	2.31	2.32	0	6	18	8	4
1914.....	79.3	106	43	2.26	3.11	2.50	1.17	0	5	18	7	5
1915.....	70.8	98	38	6.45	7.53	7.24	4.57	0	12	11	10	9
1916.....	70.0	100	42	6.86	5.05	6.50	6.04	0	10	14	9	7
1917.....	71.0	103	35	3.67	5.72	2.20	3.10	0	8	19	7	4
1918.....	77.2	110	48	3.09	3.04	3.20	3.04	0	7	17	8	5
1919.....	75.0	104	44	5.58	6.04	6.24	5.47	0	11	14	10	6
1920.....	72.7	104	41	2.35	3.09	2.14	1.83	0	6	18	7	6
1921.....	76.6	105	44	6.81	4.74	7.74	4.96	0	12	12	10	8
1922.....	76.5	103	43	1.61	1.72	1.39	1.72	0	5	19	8	3
1923.....	73.5	103	45	5.56	5.30	6.52	4.87	0	11	14	9	7
1924.....	72.5	101	38	7.27	8.53	7.70	5.57	0	14	12	12	6
1925.....	76.5	103	46	5.99	7.68	4.99	5.31	0	9	15	10	5
1926.....	70.9	101	37	3.60	5.02	3.79	1.99	0	8	15	9	6
1927.....	70.3	99	41	5.81	5.38	6.77	5.28	0	10	15	7	8
1928.....	67.7	91	40	11.25	8.59	11.03	14.12	0	15	8	11	11
1929.....	71.3	99	39	5.69	6.57	5.98	4.52	0	10	16	8	6
1930.....	72.4	109	36	3.77	5.17	4.63	1.52	0	7	18	8	4
1931.....	77.1	107	40	2.75	4.09	1.81	2.35	0	6	19	8	3
1932.....	75.2	103	47	4.81	5.53	6.09	2.82	0	10	12	12	6
1933.....	78.4	107	38	1.47	2.89	0.92	0.61	0	3	22	6	2
1934.....	80.4	108	47	2.82	2.92	2.72	2.83	0	7	17	10	3
1935.....	69.6	98	39	8.95	6.73	11.06	9.07	0	15	9	12	9
1936.....	76.5	112	40	1.42	1.30	1.88	1.57	0	4	21	6	3
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Period.....	73.6	112	33	4.61	4.66	4.96	4.22	0	9	15	9	6



## Climatological Data for June 1936

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches				Number of days				Prevailing direction of wind	Observers	
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelted	With precip., .01 inch or more	Clear	Partly cloudy			Cloudy
Northern Division																				
Bethany	Harrison	916	41	72.6	+ 0.6	103	19	43	4	40	1.98	-3.08	1.88	0	4	23	6	1	se.	A. S. Cumming
Brunswick	Chariton	652	55	77.6	+ 4.6	108	19	49	3†	40	0.14	-4.97	0.07	0	3	21	7	2	se.	O. K. Beucke
Chillicothe	Livingston	779	27	75.6	+ 2.7	110	19	43	4	44	1.29	-3.44	0.68	0	2	23	4	3	sw.	Wm. J. Olenhouse
Clifton Hill	Randolph	731	37	76.8	+ 4.4	109	28	46	4	41	1.03	-3.36	0.95	0	2	24	3	3	sw.	Dr. A. J. Bradsher
Columbia	Boone	740	46	76.2	+ 3.4	105	19	50	24	36	0.27	-4.49	0.21	0	3	16	10	4	sw.	U. S. Weather Bureau
Conception	Nodaway	980	47	75.0	+ 3.5	104	19	46	3	38	1.41	-3.54	1.23	0	4	14	15	1	se.	Fr. Adelhelm Hess
Downing	Schuyler	876	15	73.4	+ 2.0	105	19†	45	3†	43	2.02	-3.17	0.65	0	8	23	6	1	e.	James Taylor
Edgerton	Platte	856	16	76.0*	+ 4.1	107	19	45	4	46	1.38	-3.49	1.05	0	3	28	1	1	e.	Fred L. Stiff
Elsberry	Lincoln	449	5	74.6	.....	107	19	46	3†	46	1.55	.....	0.92	0	4	21	7	2	ne.	Ray E. Mills
Fayette	Howard	680	56	76.2	+ 3.4	108	19	47	13	45	0.66	-3.91	0.58	0	2	15	13	2	se.	Harry P. Mason
Fulton	Callaway	818	48	76.0	+ 2.8	106	19	46	13	46	0.08	-4.32	0.68	0	1	24	2	4	sw.	Clyde C. Herring
Gorin	Scotland	700	49	.....	.....	.....	.....	.....	.....	.....	1.82	-2.85	0.62	0	6	21	9	0	se.	W. L. Harker
Grant City	Worth	1,134	32	72.0	+ 1.2	105	19	44	4	38	1.61	-3.39	0.72	0	5	13	14	3	se.	Howard Rybolt
Hannibal	Marion	759	44	74.7	+ 2.2	104	19	49	3†	41	0.84	-3.06	0.57	0	6	15	4	11	ne.	Hannibal Water Dept.
Kansas City	Jackson	741	47	78.4	+ 4.8	107	19	51	3	40	0.51	-4.48	0.50	0	3	19	9	2	sw.	U. S. Weather Bureau
Kidder	Caldwell	1,020	44	74.1	+ 2.3	104	19	45	3	40	1.64	-3.33	1.33	0	4	21	8	1	se.	Roscoe L. Terry
King City	Gentry	1,095	10	.....	.....	.....	.....	.....	.....	.....	1.21	-4.10	1.05	0	5	9	21	0	se.	John M. Martin
Kirksville	Adair	969	47	73.8	+ 2.1	106	28	46	4	43	0.94	-4.12	0.45	0	3	22	8	0	sw.	Prof. J. S. Stokes
Linneus	Linn	816	4	.....	.....	.....	.....	.....	.....	.....	0.92	.....	0.43	0	3	23	3	4	e.	J. Robert Hall
Louisiana	Pike	469	42	73.4	+ 1.3	105	17	42	5	48	2.45	-1.78	1.00	0	4	23	4	3	s.	Stark Bro's Nurseries
Macon	Macon	875	37	75.0	+ 2.6	108	19	46	3†	46	1.57	-3.15	1.46	0	3	21	7	2	n.	W. C. Brown
Maryville	Nodaway	1,169	46	73.4	+ 3.6	104	19†	44	3	38	1.32	-3.79	1.20	0	5	15	11	4	e.	R. B. Montgomery
Mexico	Audrain	800	47	75.0	+ 1.8	106	19	45	4	43	0.54	-4.20	0.40	0	3	25	1	4	w.	Mrs. Abbie Snoddy
Monroe City	Monroe	748	15	.....	.....	.....	.....	.....	.....	.....	2.13	-2.95	0.99	0	4	22	5	3	ne.	J. S. Conway
Oregon	Holt	1,048	80	74.9	+ 2.7	105	26	47	3	36	1.75	-3.62	1.39	0	4	26	3	1	ne.	Miss Mina Wright
St. Charles	St. Charles	520	48	76.4	+ 2.5	105	29	50	12	42	1.50	-2.50	0.63	0	5	23	5	2	se.	Martin L. Connann
St. Joseph	Buchanan	957	26	76.0	+ 1.8	105	19	51	3	37	3.98	-1.26	2.41	0	5	24	4	2	e.	U. S. Weather Bureau
Shelbina	Shelby	779	43	.....	.....	.....	.....	.....	.....	.....	1.93	-2.55	1.85	0	6	.....	.....	.....	.....	J. C. Jewett
Steffenville	Lewis	650	38	74.5	+ 1.9	105	28†	45	4†	40	1.31	-3.23	0.85	0	4	18	11	1	e.	Frank Hall
Tarkio	Atchison	916	33	73.4	+ 1.6	103	26	45	3	39	2.95	-2.01	1.98	0	6	16	12	2	se.	Albert Volker
Trenton	Grundy	822	40	76.0	+ 3.8	107	29	45	3†	42	0.98	-4.06	0.73	0	3	24	6	0	s.	W. H. Estes
Unionville	Putnam	1,062	43	73.1	+ 1.8	104	28†	46	3	46	1.68	-3.51	1.17	0	4	18	3	9	s.	John H. Schick
Warrenton	Warren	816	54	76.8	+ 3.4	106	19	48	12	40	0.64	-3.14	0.44	0	4	15	12	3	sw.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.	574	65	74.0	+ 1.5	104	19	50	22	43	1.26	-2.87	0.70	0	8	13	8	9	ne.	U. S. Weather Bureau
Division means and extremes		.....	.....	75.0	+ 2.7	110	19	42	5	48	1.30	-3.36	2.41	0	4	20	7	3	se.	
Southwestern Division																				
Appleton City	St. Clair	853	41	78.0†	+ 3.6	105	28	50	4	..	1.57	-3.45	0.70	0	3	22 <sup>o</sup>	4 <sup>e</sup>	1 <sup>c</sup>	sw.	Rolla Brown
Buffalo	Dallas	1,200	6	.....	.....	.....	.....	.....	.....	.....	1.19	.....	0.44	0	3	26	2	2	.....	C. M. McCallister
Captling Mills	Cedar	750	10	.....	.....	.....	.....	.....	.....	.....	1.95	-4.21	0.83	0	4	24	3	3	ne.	Ozark Utilities Co.
Clinton	Henry	765	43	79.2	+ 5.4	111	28	50	3†	41	0.95	-3.95	0.58	0	2	21	7	2	sw.	A. E. Derwent, M. D.
Concordia	Lafayette	784	21	.....	.....	.....	.....	.....	.....	.....	0.47	-5.01	0.34	0	2	24	3	3	ne.	Miss Ora Stratman
Dean	McDonald	1,000	32	77.2	+ 4.5	106	28	46	13	49	2.35	-3.58	1.95	0	3	22	5	3	e.	E. S. Taylor
Eldon	Miller	934	41	76.1 <sup>m</sup>	+ 3.1	106	28	48	4	.....	0.50	-3.54	0.40	0	3	9 <sup>m</sup>	6 <sup>m</sup>	2 <sup>m</sup>	sw.	E. H. Shepherd
Garber	Taney	950	1	76.7	.....	107	28	43	4	50	2.22	.....	1.86	0	6	17	8	5	e.	William H. Durham
Hailey	Barry	1,350	11	.....	.....	.....	.....	.....	.....	.....	2.35	-3.25	1.21	0	3	20	4	6	ne.	A. W. Madison
Harrisonville	Cass	904	58	75.6	+ 2.5	105	19	49	3	42	1.06	-3.73	0.73	0	3	24	5	1	sw.	John H. Patterson
Jefferson City	Cole	557	46	77.0	+ 3.2	105	19†	51	3†	41	0.20	-4.03	0.15	0	2	22	8	0	s.	Mrs. Frank Klegel
Lamar	Barton	980	48	78.5	+ 4.3	107	28	53	4†	43	1.10	-4.44	0.75	0	2	26	3	1	sw.	Jesse A. Mann
LaMonte	Pettis	867	35	77.0	+ 3.0	105	17†	47	3	48	0.60	-4.10	0.60	0	1	24	5	1	s.	J. E. Wheeler
Lebanon	Laclede	1,265	48	76.6	+ 3.9	105	28	46	23	46	1.66	-3.51	0.80	0	3	25	2	3	e.	Mrs. Lou Mulcare
Lexington	Lafayette	688	51	78.8	+ 5.9	107	19†	50	3	42	0.11	-4.44	0.07	0	2	26	4	0	sw.	Miss Carrie Loomis
Lockwood	Dade	1,078	30	80.3	+ 6.7	104	20†	52	4	34	2.20	-3.48	0.98	0	4	27	2	1	sw.	Hubert A. Nieman
Marshall	Saline	779	49	76.9	+ 3.7	105	19	50	3†	36	0.15	-4.65	0.10	0	3	21	7	2	sw.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	35	76.6	+ 4.8	105	28	48	24	39	3.25	-1.69	2.20	0	6	24	5	1	s.	Mo. Fruit Exp. Sta.
Neosho	Newton	1,011	49	76.6	+ 2.8	101	28†	44	4	43	1.80	-4.17	1.35	0	4	26	2	2	sw.	U. S. Fisheries Sta.
Nevada	Verion	862	43	78.5	+ 5.0	106	28	50	24	37	3.10	-2.35	1.75	0	3	22	5	3	sw.	George A. Kaupp
Seligman	Barry	1,542	35	77.5 <sup>a</sup>	+ 5.1	99	20†	52	4	35	1.05	-3.90	0.52	0	4	26 <sup>a</sup>	1 <sup>a</sup>	2 <sup>a</sup>	e.	Floyd E. Fawver
Beymour(near)	Webster	1,642	30	75.4	+ 3.7	102	28	45	24	40	2.13	+3.21	1.25	0	4	24	4	2	sw.	A. L. Halley
Springfield	Greene	1,301	48	77.6	+ 5.1	101	20	54	4	28	2.05	-2.63	1.23	0	7	26	4	0	s.	U. S. Weather Bureau
Versailles	Morgan	1,037	4	77.1 <sup>a</sup>	.....	105	28	44	5	41	1.66	-3.17	1.11	0	3	21 <sup>a</sup>	4 <sup>a</sup>	4 <sup>a</sup>	sw.	I. M. Wilson
Warrensburg	Johnson	878	49	77.9	+ 4.0	108	19	49	3†	42	0.37	-4.69	0.27	0	2	26	1	3	ne.	E. A. Markey
Warsaw	Benton	687	35	78.7	+ 4.9	111	28	47	24	49	1.03	-4.27	0.85	0	4	23	4	3	sw.	Everett Martin
Division means and extremes		.....	.....	77.4	+ 4.3	111	28	43	4	50	1.38	-3.58	2.20	0	3	23	4	3	sw.	
Southeastern Division																				
Arcadia	Iron	926	55	74.2	+ 2.4	104	20	44	13	44	0.88	-3.26	0.88	0	4	17	7	6	n.	Arcadia College
Birch Tree(near)	Shannon	1,000	41	77.0	+ 4.3	104	28	51	25	42	3.26	-1.15	2.35	0	5	28	1	1	ne.	V. H. Kirkendall
Campbell	Dunklin	314	10																	



Daily Precipitation for June 1936

[illegible]

Continued on next page



## Daily Precipitation for June 1936—Continued from preceding page

Stations	Drainage-basins	Day of month																														Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		..
Southeastern Div.—Concluded																																	
Farmington	St. Francis			.75			.05	.82															.22									..	1.84
Fisk	do			.22				.43				T.												.55									1.20
Fredericktown	do			.46			.10	.30																.32									1.18
Goodland	Black			.50				.14			.05																						2.29
Greenville	St. Francis			.21			.03	.64																.11							1.60		1.42
Jackson	Mississippi			.15				.51																								.43	3.40
Koshkonong	Black						.14	.20			1.21												1.04									1.70	1.55
Leeper	do			.48			.13	.29				.02																					1.54
Marble Hill	Mississippi			.08				.30																.40								.35	1.13
Meramec Park	Meramec			.16				.16																									0.32
Morehouse	Mississippi							.15																.41	.04							1.84	2.44
New Madrid	do			T.																													1.45
Owensville	Gasconade							.16				.68	.03																				0.87
Parma	St. Francis																																0.42
Poplar Bluff	Black			.05				.43																									0.65
Rolla	Meramec			.47																													2.45
St. Louis	Mississippi			.62			T.	.08					1.90																				3.07
St. Louis University	do			.40				.03	.03			.77											T.	.61				T.	.02			.99	1.88
Salem	Meramec			1.32				.05	.01		T.	.36																					4.86
St. Joseph	Mississippi							1.54				.57																					0.61
Union	Meramec							.13																									0.08
Valley Park	do			.05			T.	.09				T.	T.																				0.71
Williamsville	Black			.29				.12	.75				.02																				1.96
Willow Springs (near)	White			.45				.39					2.77																				3.61
Calro, Ill.	Mississippi			.18				.03																									2.18
														</																			

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. T. Trace, or less than 0.01 inch.  
 \*\*\* Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. \*\* Precipitation in the next following measurement; separate dates of fall not recorded. \* Precipitation is for 24-hour period, midnight to midnight † Estimated. ‡ Partially estimated. |||| Incomplete.

**Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for June 1936**  
 (See precipitation data in table on preceding page)

(See precipitation data in table on preceding page)																																	
Station	Data	Day of month																														Monthly	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		..
Lakeside ..... (Osage Dam)	( Evaporation ..... Mean temperature Wind movement ..	298 75 54	543 80 162	328 66 81	250 66 54	270 68 49	213 74 84	289 76 67	296 78 44	333 82 61	395 70 72	065 70 59	250 65 62	235 68 53	303 72 47	261 78 37	312 77 45	380 82 56	380 81 54	276 83 38	397 84 69	298 84 58	418 76 91	348 70 81	325 66 54	294 70 43	342 81 63	483 82 82	.... 86 49	372 83 37	560 80 129	... ..	9.873 75.7 1,937

Observations taken at 7.30 a.m. Wind movement corrected to true velocities. For description see April 1932 report.

*Continued from page 26*

least local monthly amount was 0.07 inch at Waverly. The greatest amount in any twenty-four hours was 2.77 inches at Willow Springs on the 11th. The average number of days with 0.01 inch or more of precipitation was 4.

**MISCELLANEOUS PHENOMENA**

Dust.—Locally on 1st, 2d, 9th, 30th.

Hail.—Light, on 9th at St. Charles. Heavy, on 2d at Garber, Farmington, St. Louis University, and central part of St. Louis County; damage in St. Louis County conservatively estimated at \$10,000, but definite estimates not available; amount of damage at Garber and Farmington not estimated but reported heavy at Farmington. On 10th, at Springfield, heavy hail did damage to one greenhouse, estimated at \$2,000 to \$3,000.

Halos.—Solar, 4th, 10th, 11th, 14th, 19th, 21st, 22d, 25th, 29th.

Thunderstorms.—Local, 3d, 8th, 9th, 16th, 17th, 19th, 23d, 26th; more or less general, 2d, 5th, 6th, 7th, 10th, 21st, 22d, 27th, 29th, 30th.

Windstorms.—On 2d in central St. Louis County; minor damage to trees; also at Farmington with damage to trees. On 9th at Downing, Maryville, and Tarkio; trees damaged at Downing and trees and outbuildings damaged at Maryville, but no estimates of amount of damage reported on any of the above windstorms.

**COOPERATIVE OBSERVER H. E. DEAN**

The Weather Bureau loses, with much regret, one of its most valued cooperators, in the death, on June 6th, of Mr. H. E. Dean, in charge of the station at Dean, Mo. Mr. Dean was almost 88 years old. He had served faithfully as cooperative observer for 37 years and 6 months, but was assisted by Mr. E. S. Taylor in recent years. Mr. Taylor will carry on the work.



## Daily Temperatures for June 1936

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	..	Mean			
Northern Division																																			
Brunswick	Maximum...	91	87	77	81	79	91	86	95	93	83	78	86	90	96	98	102	98	94	108	100	92	83	85	88	96	103	101	105	103	96	..	92.3		
Brunswick	Minimum...	67	66	49	49	59	62	61	60	72	63	53	53	50	58	69	66	68	59	71	75	68	61	55	52	58	71	77	67	78	71	..	62.9		
Chillicothe	Maximum...	92	79	76	81	83	86	84	96	93	73	78	85	91	101	96	103	97	93	110	95	89	72	84	88	97	105	102	106	105	81	..	90.7		
Chillicothe	Minimum...	64	62	46	43	57	61	58	58	68	59	48	51	51	59	63	66	67	64	66	72	64	59	51	51	58	73	75	66	75	69	..	60.5		
Columbia	Maximum...	90	80	74	78	78	88	85	94	99	73	75	80	87	92	93	100	96	90	105	96	89	73	80	83	94	100	97	103	101	91	..	88.8		
Columbia	Minimum...	67	60	53	52	63	63	63	61	73	62	55	53	53	58	71	66	71	60	72	78	68	59	55	50	58	74	72	70	80	69	..	63.7		
Fayette	Maximum...	90	81	76	80	80	91	89	95	101	81	78	82	91	95	95	103	99	92	108	98	91	76	82	88	99	102	107	105	100	..	91.8			
Fayette	Minimum...	60	71	50	48	56	60	59	59	69	62	54	52	47	50	58	60	66	56	67	75	59	59	53	48	68	65	66	70	80	69	..	60.5		
Grant City	Maximum...	87	84	68	73	71	74	83	87	87	67	68	74	81	93	85	87	87	85	105	95	83	71	81	86	91	95	95	92	100	82	..	83.9		
Grant City	Minimum...	64	58	45	44	60	57	54	58	63	54	51	51	57	59	63	69	65	63	70	72	63	58	54	48	58	75	72	60	78	70	..	60.1		
Hannibal	Maximum...	90	78	74	83	83	88	86	98	98	71	77	83	92	99	102	101	97	101	107	97	93	79	83	88	97	103	101	107	103	88	..	91.7		
Hannibal	Minimum...	66	66	49	49	55	60	61	60	69	64	54	50	54	62	65	61	72	56	63	74	63	50	53	55	59	70	72	72	63	..	61.2			
Kansas City	Maximum...	90	78	74	83	83	88	86	98	98	71	77	83	92	99	102	101	97	101	107	97	93	79	83	88	97	103	101	107	103	88	..	91.7		
Kansas City	Minimum...	70	58	51	54	64	64	62	65	64	60	54	55	58	66	72	72	62	62	82	76	62	50	55	57	76	82	68	68	68	..	65.2			
Kidder	Maximum...	89	84	73	77	79	81	80	82	88	71	74	81	82	94	95	100	94	91	104	96	88	75	81	85	95	103	99	103	103	88	..	88.2		
Kidder	Minimum...	65	58	45	48	56	58	59	57	66	56	48	49	52	58	63	66	65	63	66	70	62	57	51	55	72	77	64	78	69	..	60.0			
Kirksville	Maximum...	89	83	76	80	79	86	84	92	92	72	76	82	86	94	93	98	97	89	105	98	93	73	80	85	93	101	101	106	103	84	..	89.0		
Kirksville	Minimum...	67	63	47	46	54	60	60	55	70	60	50	49	51	60	60	65	65	64	65	60	60	60	49	50	50	65	70	68	68	..	58.7			
Louisiana	Maximum...	92	84	78	80	78	92	89	87	95	75	73	80	80	93	87	95	105	90	91	100	90	65	77	80	93	101	103	104	102	90	..	88.0		
Louisiana	Minimum...	65	70	45	44	42	65	56	60	70	63	58	58	45	60	58	67	55	66	73	63	62	49	46	47	72	68	62	67	76	..	58.9			
Macon	Maximum...	90	80	79	80	79	91	87	94	98	72	77	79	87	97	90	100	98	88	108	94	82	68	81	86	97	104	102	107	105	79	..	89.3		
Macon	Minimum...	66	71	46	46	55	60	60	57	65	60	50	49	53	62	63	68	61	62	71	63	54	50	51	60	70	73	69	78	71	..	60.7			
Maryville	Maximum...	91	86	72	75	70	78	80	89	87	67	74	78	84	92	92	97	92	88	104	97	85	76	81	84	94	103	98	99	104	81	..	86.7		
Maryville	Minimum...	64	56	44	49	59	57	57	59	66	52	48	53	56	59	64	66	62	63	69	70	64	57	54	53	56	72	73	64	77	..	60.1			
Mexico	Maximum...	91	86	76	79	81	89	88	95	99	69	76	80	90	95	92	100	100	98	106	96	83	66	81	84	96	102	100	104	104	80	..	89.5		
Mexico	Minimum...	66	73	47	45	56	61	62	56	69	64	53	46	48	59	66	63	70	55	67	73	54	57	48	48	53	71	71	67	72	..	60.5			
Oregon	Maximum...	89	78	75	79	75	79	83	94	85	72	78	82	88	94	96	98	94	103	93	90	82	83	86	95	105	100	102	102	83	..	88.4			
Oregon	Minimum...	66	57	47	40	61	59	59	61	68	54	48	51	58	64	65	70	64	54	70	70	65	53	51	55	62	72	74	68	74	..	61.4			
St. Joseph	Maximum...	90	77	75	78	78	81	82	96	86	72	78	82	89	93	95	98	94	92	105	94	91	75	73	83	85	96	102	102	103	82	..	88.5		
St. Joseph	Minimum...	69	56	51	53	61	63	60	62	62	57	52	56	59	66	69	68	68	58	73	74	68	60	56	54	76	77	65	78	69	..	63.4			
Trenton	Maximum...	92	87	75	80	79	83	82	93	89	73	78	83	89	97	96	102	94	106	104	89	83	79	91	96	105	100	106	107	100	..	91.2			
Trenton	Minimum...	58	60	45	45	57	61	60	59	71	59	49	52	53	59	63	66	72	54	69	73	65	58	52	51	54	72	73	64	77	..	60.8			
Unionville	Maximum...	90	75	74	79	76	82	81	91	90	70	75	82	86	93	92	98	96	86	103	83	74	73	80	86	93	102	99	104	104	84	..	86.7		
Unionville	Minimum...	67	60	46	50	55	58	58	57	62	57	48	52	55	61	62	65	70	52	57	70	60	53	52	54	58	65	69	68	76	..	59.5			
Warrenton	Maximum...	89	88	83	79	77	90	88	93	97	83	74	81	88	91	91	98	98	95	106	104	94	75	79	81	93	97	95	104	105	..	90.5			
Warrenton	Minimum...	66	71	49	51	58	65	67	61	70	66	57	48	55	62	67	61	71	58	66	79	66	54	53	54	59	67	73	71	72	..	63.0			
Southwestern Division																																			
Appleton City	Maximum...	91	85	76	83	85	89	89	95	98	94	76	81	86	94	99	100	100	100	104	103	98	90	86	..	..	..	104	105	101	93	..	92.8		
Appleton City	Minimum...	68	70	51	50	60	60	61	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..			
Clinton	Maximum...	93	87	73	83	83	91	92	97	100	83	83	88	90	97	101	104	104	100	108	105	102	92	88	92	102	105	109	111	105	90	..	95.3		
Clinton	Minimum...	68	70	50	50	59	62	63	64	63	60	53	53	54	57	65	69	66	63	73	70	66	56	51	68	68	70	73	73	68	..	63.2			
Eldon	Maximum...	89	89	79	83	82	88	90	95	99	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..			
Eldon	Minimum...	63	67	51	48	53	60	63	61	64	68	..	..	..	..	..	..	..	..	..															





## CLIMATOLOGICAL DATA

19

## MISSOURI SECTION

ROSCOE NUNN  
ST. LOUIS, MO.

VOL. XL

JULY 1936

No. 7

PRICE: 5 CENTS A COPY; 50 CENTS A YEAR

## GENERAL SUMMARY

For high temperature, this month ranks third in the history of Missouri records, years 1888 to 1936, taking an average for the whole State. The hottest month was July 1934, with an average of  $86.2^{\circ}$ ; the second hottest, July 1901, with an average of  $85.4^{\circ}$ , and third, July 1936, with an average of  $85.3^{\circ}$ . Before records were completely analyzed it was thought that probably 1936 would be as hot or hotter than 1934, but it turns out that 1934 was  $0.9$  degree hotter than 1936. At a few stations, mostly in the northern half of the State, the 1936 average did actually prove to be slightly higher than 1934, but many other stations showed considerably lower in 1936 than 1934. Among those showing slightly hotter in 1936 were St. Louis, St. Charles, Warrenton, Fulton, Downing, Trenton, Clinton, and Nevada. As in other severe hot periods, the greater excess of temperature occurred in the northern half of the State. The Northern Division averaged  $9.5^{\circ}$  above normal; the Southwestern Division,  $7.9^{\circ}$  above; the Southeastern Division,  $5.8^{\circ}$  above. There were 17 days, between the 6th and 28th, when maximum temperatures of  $100^{\circ}$  or higher were prevalent. The record for absolute maximum temperature for the State was broken, with  $118^{\circ}$  at Clinton and Lamar, the previous high being  $117^{\circ}$  at Louisiana, Pike County, in July 1934.

For lack of July rainfall, 1936 is fourth in the records. The driest July was in 1930, with 1.00 inch; the second driest, 1934, with 1.18 inches; third, 1916, with 1.22 inches; fourth, 1936, with 1.52 inches. The rainfall was very unevenly distributed this month. The greatest deficiency occurred in the Northern Division, which had only 0.72 inch (the second smallest July amount of record for that Division), while the Southeastern Division had 2.37 inches, and the Southwestern 1.48 inches. Large areas in central sections and the upper northern counties had less than half an inch.

Comparing the droughts of 1934 and 1936, it is found that the total rainfall April 1 to July 31 in 1934 was 8.44 inches; for the same period of 1936, 7.91 inches. The June-July rainfall in 1934 was 4.00 inches; in 1936, 2.94 inches. This shows less rainfall in 1936. On the other hand, the temperature was higher in 1934 both in June and July, especially so in June, which gave the 1934 drought a rapid, early start.

The drought was already somewhat alarming at the beginning of July. By the end of the month it had become one of the most severe of record, but probably not yet quite as disastrous as the 1934 drought. Probably three-fourths of the corn was ruined as a grain-producing crop by July 31. But there was still some good corn in about six lower southeastern counties, in a few spots in the northwestern quarter of the State, and in some other fine bottom lands. Many farmers were cutting corn for stock feed. Grasshoppers were doing much damage in western and northern sections. Pastures were burned out except a few spots in bottoms or shaded places. There was no third cutting of alfalfa except in southeastern counties. All hay crops, gardens, and truck crops were very poor. Water supplies were getting very low and many farmers were hauling water for stock.

All rivers were very low, but the Mississippi, relatively, as compared with normal, was slightly lower than the Missouri. The lowest July stage of record occurred at St. Louis, with 2.2 feet below zero on the 31st.

(Continued on page 34)

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind				Relative humidity			
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	7 a. m.	12 noon	7 p. m.	Percentage of sunshine
Columbia.....	29.91	30.35	30	29.67	23	7.5	26	nw.	19	61	31	31	85
Kansas City.....	29.89	30.34	30	29.63	27	9.2	56	nw.	27	61	28	26	94
St. Joseph.....	29.89	30.34	30	29.60	24	7.6	38	n.	19	57	31	28	93
St. Louis.....	29.92	30.34	30	29.70	23	10.7	42	ne.	19	62	36	36	86
Springfield.....	29.94	30.29	31	29.67	18	8.4	40	sw.	16	68	35	34	89
Cairo, Ill.....	29.93	30.26	31	29.75	18	7.4	27	se.	7	84	60	62	81
Keokuk, Iowa..	29.90	30.39	30	29.65	25	7.0	21	sw.	4	52	30	29	89

## COMPARATIVE DATA FOR JULY

Year	Temperature			Precipitation				Number of days				
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy
1888.....	79.3	111	50	2.85	4.44	1.50	2.62	0	7	..	..	..
1889.....	77.1	107	46	4.02	4.22	3.80	4.03	0	8	..	..	..
1890.....	79.6	110	42	3.04	3.12	3.90	2.10	0	5	..	..	..
1891.....	72.7	103	45	3.23	4.13	4.16	1.41	0	8	..	..	..
1892.....	75.8	102	45	4.88	5.27	4.95	4.43	0	9	12	10	5
1893.....	77.3	103	51	4.67	4.72	6.19	3.10	0	8	14	12	5
1894.....	76.5	109	42	2.67	1.48	3.43	3.11	0	5	18	10	3
1895.....	74.4	106	45	6.77	6.36	6.91	7.03	0	10	10	12	9
1896.....	77.3	108	48	5.51	7.53	4.34	4.66	0	9	15	11	5
1897.....	78.7	106	48	3.14	4.11	2.70	2.62	0	6	19	9	3
1898.....	76.1	104	42	5.72	5.00	5.71	6.44	0	9	16	10	5
1899.....	76.0	102	43	4.50	4.88	4.32	4.30	0	9	15	11	5
1900.....	76.9	102	46	4.15	3.91	4.58	3.96	0	8	17	10	4
1901.....	85.4	116	46	2.02	2.23	1.93	1.90	0	5	19	10	2
1902.....	77.0	103	50	4.10	5.95	4.54	1.80	0	8	17	11	3
1903.....	77.4	102	51	3.40	2.79	3.56	3.85	0	8	17	10	4
1904.....	74.2	100	47	4.61	4.86	5.32	3.65	0	10	15	11	5
1905.....	73.4	101	48	8.07	4.86	9.90	9.46	0	12	12	10	9
1906.....	74.7	100	48	3.54	2.33	4.11	4.19	0	8	17	9	5
1907.....	78.4	105	51	4.56	6.62	3.78	3.28	0	8	19	8	4
1908.....	76.5	101	49	3.36	3.36	3.09	3.64	0	8	18	9	4
1909.....	76.7	102	41	6.16	7.01	6.33	5.14	0	10	17	8	6
1910.....	76.8	109	46	5.79	4.79	4.59	7.99	0	9	16	9	6
1911.....	78.0	113	43	3.68	3.41	4.78	2.86	0	8	16	9	6
1912.....	78.8	104	52	2.88	2.15	2.53	3.95	0	7	18	9	4
1913.....	80.2	108	47	3.10	2.52	2.86	3.93	0	7	18	9	4
1914.....	80.5	109	45	2.67	2.48	3.98	1.56	0	7	17	9	5
1915.....	74.6	102	42	5.74	9.05	4.39	3.78	0	12	14	9	8
1916.....	81.6	109	52	1.22	1.28	1.01	1.36	0	3	25	5	1
1917.....	77.5	107	42	3.08	1.71	3.36	4.18	0	8	20	8	3
1918.....	77.1	110	41	1.62	1.98	1.89	1.00	0	6	19	8	4
1919.....	80.0	105	50	2.30	3.00	2.21	1.69	0	5	23	6	2
1920.....	76.3	105	47	3.30	3.69	3.17	3.05	0	7	18	8	5
1921.....	80.3	109	46	2.32	2.29	2.39	2.28	0	5	20	8	3
1922.....	76.8	103	46	5.50	6.87	5.57	4.06	0	8	17	9	5
1923.....	78.2	105	50	3.16	2.61	4.29	2.59	0	6	18	8	5
1924.....	73.3	103	40	5.55	4.42	6.65	5.57	0	10	15	11	5
1925.....	77.9	106	46	2.70	2.56	2.76	2.79	0	7	16	10	5
1926.....	78.0	108	40	3.07	3.66	2.54	3.02	0	7	17	9	5
1927.....	75.8	101	48	4.16	2.82	5.38	4.28	0	8	18	9	4
1928.....	77.2	102	48	2.93	3.47	3.15	2.16	0	7	17	10	4
1929.....	77.8	104	50	4.03	5.50	2.58	4.01	0	8	16	10	5
1930.....	81.2	113	42	1.00	0.50	1.48	1.01	0	8	22	7	2
1931.....	80.3	110	49	3.31	2.83	3.45	3.65	0	7	18	9	4
1932.....	79.8	109	48	3.61	3.89	4.08	2.85	0	7	19	8	4
1933.....	79.3	108	49	2.67	1.73	2.44	3.84	0	5	18	9	4
1934.....	86.2	117	48	1.18	0.82	1.22	1.50	0	4	20	9	2
1935.....	80.8	104	53	3.30	3.90	2.06	3.94	0	6	20	9	2
1936.....	85.3	118	44	1.52	0.72	1.48	2.37	0	3	23	6	2
Period.....	78.0	118	40	3.68	3.75	3.78	3.61	0	7	18	9	4



## Climatological Data for July 1936

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches				Number of days				Prevailing direction of wind	Observers	
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelting	With precip., of inch or more	Clear	Partly cloudy			Cloudy
Northern Division																				
Bethany	Harrison	916	41	85.4	+ 9.1	110	15	51	31	41	0.29	-3.87	0.25	0	2	28	3	0	sw.	A. S. Cumming
Brunswick	Chariton	652	55	87.2	+11.1	114	15	57	31	40	1.63	-2.48	1.10	0	3	23	7	1	sw.	O. K. Beecke
Chillicothe	Livingston	779	27	86.3	+ 7.4	116	15	55	31	48	0.76	-2.66	0.40	0	3	25	6	0	sw.	Wm. J. Olenhouse
Chilton Hill	Randolph	731	37	87.5	+11.1	116	15	55	31	44	1.39	-1.97	0.93	0	3	27	4	0	sw.	Dr. A. J. Bradsher
Columbia	Boone	740	46	86.6	+ 9.7	111	15	59	31	38	0.97	-2.52	0.48	0	5	22	8	1	sw.	U. S. Weather Bureau
Conception	Nodaway	980	47	87.0	+10.4	109	15†	58	31	39	0.88	-3.79	0.44	0	2	21	10	0	sw.	Fr. Adelhelm Hess
Downing	Schuyler	876	15	86.4	+10.0	115	15	53	31	38	0.03	-3.78	0.03	0	1	30	1	0	s.	James Taylor
Edgerton	Platte	856	16	85.6*	+ 9.5	110	14†	54	31	47	0.87	-2.63	0.82	0	2	31	0	0	s.	Fred L. Stiff
Elsberry	Lincoln	449	5	85.2*	.....	110	14	.....	.....	41	0.03	.....	0.03	0	1	23†	4	2†	ne.	Ray E. Mills
Fayette	Howard	680	56	85.8	+ 8.6	116	15	50	31	47	0.17	-3.08	0.17	0	1	18	10	3	sw.	Harry P. Mason
Fulton	Callaway	818	48	85.8	+ 8.1	113	15	50	31	45	0.58	-2.71	0.24	0	4	23	6	2	sw.	Clyde C. Herring
Gorin	Scotland	700	49	.....	.....	.....	.....	.....	.....	.....	0.11	-3.50	0.11	0	1	29	2	0	sw.	W. L. Harker
Grant City	Worth	1,134	32	85.0	+ 8.8	110	25	55	31	40	0.36	-4.27	0.36	0	1	17	14	0	sw.	Howard Kybolt
Hannibal	Marion	759	44	86.1	+ 9.3	109	15	58	31	31	1.05	-2.04	0.60	0	3	13	14	4	ne.	Hannibal Water Dept.
Kansas City	Jackson	741	47	87.8	+ 9.7	109	24	58	31	41	0.36	-3.77	0.36	0	2	25	5	0	sw.	U. S. Weather Bureau
Kidder	Caldwell	1,020	44	85.6	+ 9.0	111	15	54	31	40	0.96	-2.92	0.45	0	3	24	7	0	sw.	Roseoe L. Terry
King City	Gentry	1,095	10	.....	.....	.....	.....	.....	.....	.....	0.76	-2.78	0.57	0	2	5†	17†	0†	sw.	John M. Martin
Kirksville	Adair	969	47	85.8	+ 9.8	113	15	53	29	45	0.32	-3.98	0.32	0	1	23	8	0	sw.	Prof. J. S. Stokes
Linneus	Linn	816	4	.....	.....	.....	.....	.....	.....	.....	2.01	.....	1.13	0	4	24	7	0	sw.	J. Robert Hall
Louisiana	Pike	469	42	86.0	+ 9.6	115	26†	48	31	53	0.85	-2.75	0.85	0	1	23	8	0	s.	Stark Bro's Nurseries
Macon	Macon	875	37	86.4	+ 9.2	116	15	54	31	39	2.61	-0.80	1.14	0	5	25	5	1	nw.	W. C. Brown
Maryville	Nodaway	1,169	46	85.4	+ 9.7	110	25	58	31	39	0.37	-4.86	0.25	0	2	24	6	1	sw.	R. B. Montgomery
Mexico	Audrain	800	47	86.4	+ 9.1	113	15	52	22†	53	0.99	-2.22	0.57	0	6	25	1	5	w.	Mrs. Abbie Snoddy
Moberly	Randolph	875	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	J. W. Adams
Monroe City	Monroe	748	15	.....	.....	.....	.....	.....	.....	.....	0.96	-2.70	0.81	0	3	29	2	0	ne.	J. S. Conway
Oregon	Holt	1,048	80	86.8	+11.2	111	25	59	30†	39	0.53	-3.65	0.44	0	2	28	3	0	sw.	Miss Mina Wright
St. Charles	St. Charles	520	48	87.8	+ 9.7	114	14	59	31	37	0.19	-2.80	0.11	0	3	27	4	0	s.	Martin L. Comann
St. Joseph	Buchanan	957	26	87.0	+ 7.5	108	25	63	31	35	0.95	-2.73	0.88	0	3	28	3	0	s.	U. S. Weather Bureau
Shelbina	Shelby	779	43	.....	.....	.....	.....	.....	.....	.....	1.47	-2.40	0.71	0	3	.....	.....	.....	.....	J. C. Jevett
Steffenville	Lewis	650	38	86.5	+ 8.7	115	15	50	31	47	0.02	-4.09	0.02	0	1	21	10	0	sw.	Frank Hall
Tarkio	Atchison	916	33	85.5	+ 8.7	113	25	55	31	40	0.40	-3.75	0.34	0	3	27	3	1	sw.	Albert Volker
Trenton	Grundy	822	40	87.8	+11.0	114	15	55	31	46	0.50	-3.57	0.25	0	2	27	4	0	s.	W. H. Estes
Unionville	Putnam	1,062	43	86.0	+ 9.5	113	15	56	31	42	0.44	-3.68	0.44	0	2	24	6	1	s.	John H. Schick
Warrenton	Warren	816	54	87.4	+ 9.6	111	14†	53	31	36	0.07	-3.07	0.05	0	2	13	16	2	sw.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia	574	65	87.0	+10.1	113	15	61	31	35	0.01	-3.40	0.01	0	1	21	7	3	sw.	U. S. Weather Bureau
Division means and extremes		.....	.....	88.4	+ 9.5	118	15	48	31	53	0.72	-8.03	1.17	0	2	24	6	1	sw.	
Southwestern Division																				
Appleton City	St. Clair	853	41	86.4	+ 8.2	115	15	53	31	42	T.	-4.31	T.	0	0	29	1	1	sw.	Rolla Brown
Buffalo	Dallas	1,200	6	.....	.....	.....	.....	.....	.....	.....	2.57	.....	2.41	0	3	27	4	0	.....	C. M. McCallister
Caplinger Mills	Cedar	750	10	.....	.....	.....	.....	.....	.....	.....	T.	-2.52	T.	0	0	28	1	2	sw.	Ozark Utilities Co.
Clinton	Henry	765	43	88.4	+10.1	118	15	66	3†	42	0.39	-3.04	0.39	0	1	22	9	0	sw.	A. E. Derwent, M. D.
Concordia	Lafayette	784	21	.....	.....	.....	.....	.....	.....	.....	2.36	-1.63	2.36	0	1	26	4	1	sw.	Miss Ora Stratman
Dean H.	McDonald	1,000	32	84.0	+ 6.7	113	18	46	31	47	2.36	-2.05	1.78	0	2	22	7	2	e.	E. S. Taylor
Eldon	Miller	934	41	86.2	+ 9.0	113	15	52	31	41	0.53	-2.69	0.53	0	1	13	16	2	sw.	E. H. Shepherd
Garber	Taney	950	1	83.8	.....	112	18	49	31	44	2.64	.....	2.36	0	3	21	6	4	e.	William H. Durham
Hailey	Barry	1,350	11	.....	.....	.....	.....	.....	.....	.....	2.97	-0.72	2.56	0	2	29	1	1	sw.	A. W. Madison
Harrisonville	Cass	904	58	85.8	+ 8.1	111	15†	60	31	37	1.04	-2.57	0.82	0	2	25	5	1	sw.	John H. Patterson
Jefferson City	Cole	557	46	86.7	+ 8.6	112	14	55	31	37	0.51	-2.60	0.25	0	3	29	2	0	s.	Mrs. Frank Kliegel
Lamar	Barton	980	48	86.3	+ 7.9	118	18	55	31	45	1.93	-2.29	1.75	0	3	25	5	1	sw.	Jesse A. Mann
LaMonte	Pettis	867	35	85.8	+ 6.7	114	15	53	31	43	1.11	-2.48	1.05	0	2	30	1	0	s.	J. E. Wheeler
Lebanon	Laclede	1,265	48	84.4*	+ 7.5	110	14	51	31	36	2.58	-1.38	1.76	0	2	26	3	1	sw.	Mrs. Lou Mulcare
Lexington	Lafayette	688	51	87.8	+10.4	113	15	60	31	37	3.00	-1.01	2.40	0	3	28	3	0	sw.	Miss Carrie Loomis
Lockwood	Dade	1,078	30	86.2	+ 8.6	114	18	55	31	38	0.92	-3.84	0.87	0	2	29	1	1	sw.	Hubert A. Nieman
Marshall	Saline	779	49	86.6	+ 9.1	112	15	58	31	41	1.00	-2.57	1.00	0	1	27	3	1	sw.	See Chamber of Commerce
Mountain Grove	Wright	1,463	35	83.0	+ 6.6	109	15	52	31	37	2.47	-1.42	1.49	0	3	24	6	1	s.	Mo. Fruit Exp. Sta.
Neosho	Newton	1,011	49	84.0	+ 6.5	110	18†	51	31	42	1.47	-3.18	1.40	0	2	20	1	0	sw.	U. S. Fisheries Sta.
Nevada	Vernon	862	43	87.4	+ 7.8	117	18	52	31	47	1.83	-1.83	1.77	0	2	25	5	1	sw.	T. J. Kaupp
Seligman	Barry	1,542	35	83.6	+ 6.9	108	18	57	31	32	0.98	-3.14	0.92	0	2	28	3	0	sw.	Floyd E. Fawver
Seymour(near)	Webster	1,642	30	81.6	+ 6.1	105	15	48	31	38	2.26	-1.68	1.78	0	5	25	5	1	sw.	A. L. Hailey
Springfield	Greene	1,301	48	84.2	+ 7.4	106	15†	60	31	34	1.11	-3.10	0.42	0	6	25	6	0	s.	U. S. Weather Bureau
Versailles	Morgan	1,037	4	86.2	.....	114	15	50	31	40	0.12	-4.21	0.12	0	1	26	4	1	sw.	I. M. Wilson
Warrensburg	Johnson	878	49	86.8	+ 8.0	114	15	57	31	44	1.25	-2.72	1.25	0	1	30	0	1	sw.	E. A. Markey
Warsaw	Benton	687	35	87.0	+ 8.7	113	15	51	31	41	0.55	-3.46	0.54	0	2	26	4	1	sw.	Everett Martin
Division means and extremes		.....	.....	85.6	+ 7.9	118	15†	48	31	47	1.48	-2.30	3.68	0	2	28	4	1	sw.	
Southeastern Division																				
Arcadia	Iron	926	55	82.8	+ 7.0	107	15	49	31	37	2.00	-2.12	1.89	0	5	18	8	5	s.	Arcadia College
Birch Tree(near)	Shannon	1,000	41	83.5	+ 6.9	109	14†	59	31	36	1.62	-1.96	0.86	0	5					



## Daily Precipitation for July 1936

Continued on next page



## Daily Precipitation for July 1936—Continued from preceding page

Stations	Drainage-basins	Day of month																															Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Southeastern Div.—Concluded																																	
Doniphan	Black	2.30	.30											.20			T.	T.		.90	1.04										T.		4.74
Farmington	St. Francis	1.27							.08							.07	.08				T.												1.50
Fisk	do	.73	1.31	.34														.04		.02			T.							.07		2.51	
Fredericktown	do	1.82	.05														.78	.22														2.87	
Goodland	Black	.42															T.			.05												0.47	
Greenville	St. Francis	.56														.20															.21	0.97	
Jackson	Mississippi	.74						.09									.15	.92		.06	.61											0.98	
Koshkonong	Black	1.02	.03												.09		T.	.92		.06	.61									.04		2.77	
Leeper	do	.86	.30														.13	.06		.05										T.		1.40	
Marble Hill	Mississippi	.60															.18		.27													1.05	
Meramec Park	Meramec																.22	.07			.09											0.38	
Morehouse	Mississippi	1.49	.13														.06													.47		2.15	
New Madrid	do	1.27	3.00	.78	.01				T.									.51		.05			.55							.12		6.29	
Owensville	Gasconade																.24				.24	.03										0.51	
Parma	St. Francis	2.32	1.50	.66																.04	.10			.24	.03							4.58	
Poplar Bluff	Black	1.85	.90	.18																.14		.40	.24							.25		4.00	
Rolla	Meramec	1.47		.05													.17	.66					.40	.24								2.35	
St. Louis***	Mississippi		.06						T.								.14		T.	.30	.10									T.		0.60	
St. Louis University*	do																.14			.58	.06								T.			0.78	
Salem	Meramec	.41												.12	.09	.89				.09												2.60	
Slakeston	Mississippi	2.35	.77	.10					.02									.12							.02	.02				1.05		4.45	
Union	Meramec	.33															.05				.44	.02										0.84	
Valley Park	do	.49								T.		T.								.18					T.							0.67	
Williamsville	Black	1.24	.40	.02											.04		.01	.06		.09						T.				.06		1.92	
Willow Sprgs. (near)	White	2.07	.11														.27	.24												.08		2.77	
Cairo, Ill.***	Mississippi	1.38	.06						.86				T.				.15	T.		T.	.01	.16	.02						T.			2.64	

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. †† Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. T. Trace, or less than 0.01 inch.  
 \*\*\* Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. \*\* Precipitation in the next following measurement; separate dates of fall not recorded. \* Precipitation is for 24-hour period, midnight to midnight † Estimated. ‡ Partially estimated. |||| Incomplete.

**Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for July 1936**  
 (See precipitation data in table on preceding page)

Station	Data	Day of month																															Monthly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Lakeside ..... (Osage Dam)	{ Evaporation .....	.046	.199	.243	.350	.382	.381	.361	.228	.390	.430	.368	.379	.352	.390	.289	.450	.426	.350	.305	.314	.224	.364	.372	....	.493	.555	.495	.468	.324	.461	.334	11.091
	{ Mean temperature ..	78	78	78	81	78	83	82	84	83	85	84	86	88	90	92	92	87	86	84	80	76	79	86	86	92	92	88	86	86	76	68	83.6
	{ Wind movement ..	44	39	40	51	82	67	56	52	51	64	67	60	36	34	47	56	39	35	59	60	38	44	55	91	89	120	84	73	32	52	67	1,784

Observations taken at 7.30 a.m. Wind movement corrected to true velocities. For description see April 1932 report.

*Continued from page 31*

**TEMPERATURE**

The monthly mean temperature for the State, 70 stations reporting, was 85.3°, or 7.3° above normal. The highest monthly mean was 88.4° at Clinton, and the lowest monthly mean was 80.8° at Goodland. The highest temperature recorded was 118° at Clinton on the 15th and at Lamar on the 18th, and the lowest was 44° at Goodland on the 31st. The greatest daily range was 53° at Louisiana on the 24th and at Mexico on the 22d.

**PRECIPITATION**

The average precipitation for the State, 123 stations reporting, was 1.52 inches, or 2.16 inches less than normal. The greatest local monthly amount was 6.55 inches at Campbell, and the least local monthly amount was Trace at Kahoka, Memphis, Appleton City, and Caplinger Mills. The greatest amount in any twenty-four hours was 5.24 inches at Campbell on the 1st. The average number of days with 0.01 inch or more of precipitation was 3.

**MISCELLANEOUS PHENOMENA**

Dust.—Locally on 19th and 20th.

Fog.—Dense, 1st, 3d.

Hail.—Light, 16th at Crystal City and Salem, 20th at Doniphan; moderate, 16th at Springfield, 27th at Lexington; heavy, 19th at Seymour, "everything ruined over a path one-half mile wide and two miles long"; 20th at Koshkonong.

Halos.—Solar, 1st, 15th, 25th; lunar, 1st.

Thunderstorms.—Local, 1st, 7th, 8th, 9th, 11th, 12th, 13th, 14th, 15th, 16th, 18th, 21st, 22d, 24th, 25th; more or less

general, 19th, 20th, 27th, 28th.

Windstorms.—On the 16th at Springfield, near Farmington, and in Pemiscot County, with damage to trees, outbuildings, houses, and power and transmission lines. On the 19th high winds were rather general over the northern half of the State, also at Appleton City and Doniphan, with minor damage to houses, trees, and power and transmission lines. One person was killed at Independence and three were reported injured. On the 25th at Appleton City trees were uprooted, houses damaged, and light poles broken. On the 28th at Mexico. On the 29th at Morehouse with considerable damage to trees and buildings. (Estimated damage not available for any of the above windstorms.)

**MOBERLY, MO., COOPERATIVE STATION**

Records representing the important industrial and commercial area of which Moberly is the center will be available from now on, a cooperative climatological station having been established at Moberly on July 23d, with Mr. J. W. Adams in charge.

**DEATH OF GEORGE A. KAUPP, COOPERATIVE OBSERVER**

Mr. George A. Kaupp, in charge of the Nevada station since May 1918, died on July 28. Mr. Kaupp rendered excellent service as cooperative observer during these 18 years, and he will be greatly missed from the corps of observers in Missouri. His son, T. J. Kaupp, has accepted the position of cooperative observer to carry on the work.

**ERRATA**

June 1936, page 27, mean temperature for Columbia should be 76.3; departure should be + 3.5. Page 30, minimum temperature on 14th at Columbia should be 59; mean minimum should be 63.8.



## Daily Temperatures for July 1936

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
Northern Division																																		
Brunswick	Maximum	90	92	100	105	103	100	102	102	103	105	105	105	109	112	114	107	107	103	105	97	93	99	104	107	108	106	108	102	95	89	92	102.2	
	Minimum	66	70	61	75	74	75	71	73	73	72	74	73	75	80	78	78	77	75	76	67	62	61	75	67	84	82	82	71	68	65	57	72.2	
Chillicothe	Maximum	95	92	102	108	105	103	103	103	104	106	107	107	111	112	116	108	109	104	105	87	93	102	104	110	111	109	110	100	95	87	90	103.2	
	Minimum	63	63	58	73	73	72	70	72	75	74	74	72	73	74	72	76	71	75	73	64	59	58	61	62	82	81	81	69	63	62	55	69.4	
Columbia	Maximum	89	92	98	104	102	100	102	102	103	104	103	103	107	109	111	105	103	102	101	81	90	96	103	106	106	104	106	93	93	84	88	99.8	
	Minimum	66	68	60	75	76	76	75	74	77	77	78	75	78	79	81	80	75	80	71	67	62	69	78	69	84	83	79	72	71	65	59	73.4	
Fayette	Maximum	86	91	97	106	105	104	106	105	106	108	108	107	109	110	116	108	104	104	104	90	83	92	101	110	108	110	112	101	92	86	91	101.9	
	Minimum	65	66	55	72	69	71	69	68	69	67	71	68	76	83	74	78	73	70	78	64	60	59	69	63	82	83	81	70	75	65	50	69.8	
Grant City	Maximum	93	93	101	109	101	98	99	100	100	101	102	105	105	103	104	102	107	102	100	97	82	100	99	104	110	104	100	93	93	81	61	55	70.8
	Minimum	65	63	65	74	76	72	70	73	76	75	74	72	73	69	72	76	69	79	73	64	63	60	75	70	88	83	81	69	61	55	70.8		
Hannibal	Maximum	87	86	95	103	104	101	102	103	102	103	102	103	105	107	109	102	100	95	97	87	90	96	104	102	107	105	107	97	93	84	88	98.9	
	Minimum	65	68	64	75	75	77	77	77	74	77	79	80	79	81	81	78	75	78	72	68	63	65	77	71	78	85	80	71	66	59	58	73.3	
Kansas City	Maximum	93	93	103	108	103	99	100	100	101	104	104	105	105	109	107	106	105	104	102	93	92	102	102	109	108	106	108	95	93	84	88	101.0	
	Minimum	67	70	64	79	79	79	78	79	80	81	80	82	72	73	77	73	76	82	73	73	67	64	81	68	85	84	72	74	72	67	58	74.5	
Kidder	Maximum	98	91	102	106	104	99	100	100	101	103	103	103	107	108	111	106	106	102	103	99	90	99	103	106	109	106	107	96	93	86	87	100.9	
	Minimum	61	62	62	70	71	73	72	73	74	74	73	73	74	76	75	76	73	74	70	63	60	65	73	67	83	81	81	69	65	61	54	70.3	
Kirksville	Maximum	95	92	97	108	105	101	102	101	101	103	103	106	110	111	113	104	106	94	103	95	92	99	104	105	109	107	109	99	94	87	88	101.4	
	Minimum	65	63	64	63	63	74	74	76	72	74	75	76	78	81	78	77	72	77	69	64	58	59	76	65	82	82	82	70	53	57	56	70.2	
Louisiana	Maximum	80	90	96	107	105	103	104	107	105	112	106	114	110	111	113	107	104	93	102	90	90	90	110	113	114	115	115	95	85	80	86	101.8	
	Minimum	62	68	64	75	77	77	75	77	75	77	70	75	74	76	70	75	80	67	75	72	70	53	53	76	60	79	83	80	70	65	55	48	70.2
Macon	Maximum	94	90	100	107	105	104	104	104	105	107	107	109	112	111	116	105	102	95	102	85	91	96	105	101	109	107	109	100	93	84	88	101.6	
	Minimum	65	65	61	74	74	74	72	72	72	76	78	76	77	82	78	79	72	74	72	63	59	62	73	66	77	84	82	70	63	60	54	71.2	
Maryville	Maximum	93	93	102	108	103	98	100	97	100	102	102	102	105	108	108	106	105	100	102	98	89	100	100	106	110	107	102	100	95	86	88	100.5	
	Minimum	64	63	64	73	69	67	67	69	72	73	68	72	73	75	76	77	75	73	65	62	61	72	70	84	80	84	69	67	61	58	70.3		
Mexico	Maximum	90	93	100	108	105	103	104	105	105	107	107	108	110	110	113	109	106	102	104	83	91	105	109	108	110	107	108	98	95	84	90	102.5	
	Minimum	63	57	57	72	75	74	73	72	76	73	77	78	78	75	78	77	69	77	72	65	57	52	74	66	79	82	80	71	65	61	52	70.2	
Moberly	Maximum	93	94	103	107	104	100	100	100	102	104	103	103	105	108	107	107	107	104	105	95	93	105	103	107	111	108	105	97	92	90	89	101.6	
	Minimum	64	62	66	73	71	72	72	74	75	76	78	77	75	78	79	76	79	71	68	63	66	72	73	83	80	82	69	65	59	59	72.0		
Oregon	Maximum	92	92	102	106	102	98	99	98	99	102	102	101	104	106	106	107	105	103	92	92	100	103	107	108	106	104	91	91	86	87	99.8		
	Minimum	66	67	69	79	75	77	77	78	79	82	78	79	77	73	77	78	79	80	69	69	66	68	78	73	85	84	69	72	71	65	63	74.3	
St. Joseph	Maximum	96	93	105	108	107	104	103	103	104	106	106	106	110	112	114	108	107	105	100	94	101	105	108	110	108	109	101	95	88	90	103.6		
	Minimum	64	63	59	75	77	77	73	75	74	75	75	72	75	78	77	77	78	74	75	65	61	60	77	64	86	84	72	65	62	55	71.9		
Trenton	Maximum	94	91	99	108	106	102	102	102	102	104	106	110	111	113	102	107	94	104	87	92	99	103	105	110	108	106	104	93	87	90	101.5		
	Minimum	60	63	63	72	64	74	71	74	74	75	76	76	76	79	76	77	76	78	70	66	60	64	72	68	71	82	81	70	65	59	56	70.6	
Unionville	Maximum	88	94	97	104	104	102	104	103	103	106	105	106	107	111	111	104	104	100	100	91	91	96	105	106	107	108	104	93	90	89	101.2		
	Minimum	67	70	61	72	75	75	76	75	77	78	77	79	80	82	81	70	77	73	69	61	68	76	71	82	82	81	85	70	60	53	73.6		
Warrenton	Maximum	87	96	98	102	99	98	99	100	102	104	101	103	109	110	115	112	108	113	106	102	96	103	108	109	106	106	108	102	99	90	92	102.7	
	Minimum	67	65	64	70	70	71	69	69	71	71	70	72	71	79	74	76	71	71	69	66	67	62	72	75	79	78	77	71	72	61	53	70.2	
Appleton City	Maximum	90	96	101	106	102	103	103	103	105	107	105	108	112	111	118	113	112	113	108	105	98	105	113	11									





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# CLIMATOLOGICAL DATA

19

## MISSOURI SECTION

ROSCOE NUNN  
ST. LOUIS, MO.

VOL. XL

AUGUST 1936

No. 8

PRICE: 5 CENTS A COPY; 50 CENTS A YEAR

### GENERAL SUMMARY

Severe heat-drought conditions that began in June, and prevailed throughout July, were practically unbroken in August, although a few days of comparatively moderate temperatures marked the first week. From about the 9th to the 28th occurred the hottest spell for so late in summer ever known in Missouri, and the month as a whole was decidedly the warmest August of record (years 1888 to 1936). The daily temperature records on page 40 show the remarkable prevalence of maximum temperatures above 100°.

It was the second driest August of record, August 1909 being the only one with less rainfall. The lack of rainfall was uniform over most of the State, but slightly more marked in the Southeastern Division. Several southeastern counties had escaped drought in July, but they suffered considerably in August. There was no general rain of consequence during the month, but heavy showers occurred on the 7-8th over a central region including portions of the counties of Lafayette, Pettis, Howard, Boone, Cooper, and Cole.

The drought, not yet broken at the end of August, was somewhat more severe than ever before recorded. (For comparative data on droughts, see the special article on page 39).

Crops deteriorated throughout the month and were in some areas the poorest ever known, but the general average condition in the State, although very low, was apparently somewhat better than in 1934.

River stages reached the lowest points ever known (except when affected by ice jams) in the lower Missouri and in the Mississippi at Hannibal, St. Louis, and Chester, Ill.

### TEMPERATURE

The monthly mean temperature for the State, 71 stations reporting, was 84.6°, or 8.2° above normal. The highest monthly mean was 88.6° at Clinton and Nevada, and the lowest monthly mean was 80.0° at Goodland. The highest temperature recorded was 116° at Clinton on the 16th, and the lowest was 43° at Dean on the 1st. The greatest daily range was 51° at Dean on the 31st.

### PRECIPITATION

The average precipitation for the State, 124 stations reporting, was 0.84 inch, or 3.00 inches less than normal. The greatest local monthly amount was 3.48 inches at Jefferson City, and the least local monthly amount was trace at Cape Girardeau. The greatest amount in any twenty-four hours was 2.82 inches at Jefferson City on the 8th. The average number of days with 0.01 inch or more of precipitation was 4.

### MISCELLANEOUS PHENOMENA

Fog.—Dense, 6th.

Hail.—Light, 8th at Warrenton, 18th at Downing.

Halos.—Solar, 6th, 7th; lunar, none.

Thunderstorms.—Local, 7th, 8th, 13th, 14th, 18th, 20th, 21st, 26th, 27th, 29th; more or less general, 15th, 16th, 17th, 19th, 22d, 23d, 28th.

Tornado.—On the 28th at Reform, Callaway County; barns and trees damaged. Funnel-shaped cloud observed about 1.15 a. m.

Windstorms.—On the 17th at Houston; roofs, plate glass

windows, trees, and power lines damaged; damage estimated at about \$1,500. On 18th at Branson and vicinity, several buildings damaged, windows broken, trees uprooted, and telephone and power lines blown down; estimated damage \$2,000. (This storm reported as a tornado by the press). On 21st in northwestern section of the State, particularly at Bethany, Cameron, Forest City, and Oregon, damage to trees, power and transmission lines, roofs, outbuildings, and window glass.

(Continued on page 39)

### PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind			Relative humidity			Percentage of sunshine	
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	7 a. m.	12 noon		7 p. m.
Columbia.....	29.90	30.21	1	29.69	25	7.5	24	nw.	16	65	37	40	70
Kansas City.....	29.90	30.20	1	29.64	14	9.1	34	sw.	14	60	34	33	76
St. Joseph.....	29.90	30.21	1	29.63	25	7.6	21	s.	17	64	36	38	75
St. Louis.....	29.95	30.23	1	29.76	25	11.6	48	s.	15	62	39	39	80
Springfield.....	29.96	30.19	7	29.78	25	9.3	24	nw.	28	61	35	38	77
Cairo, Ill.....	29.97	30.16	31	29.77	10	7.3	18	n.	5	78	47	50	78
Keokuk, Iowa..	29.93	30.27	1	29.67	14	7.0	21	ne.	19	64	38	39	75

### COMPARATIVE DATA FOR AUGUST

Year	Temperature			Precipitation				Number of days				
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy
1888.....	74.0	110	45	7.03	5.95	7.84	7.30	0	11	..	..	..
1889.....	73.5	101	52	1.69	1.65	2.11	1.31	0	14	..	..	..
1890.....	73.3	106	47	5.13	4.25	7.21	3.93	0	9	..	..	..
1891.....	73.2	102	38	5.29	5.96	5.14	4.78	0	8	..	..	..
1892.....	74.3	102	44	2.65	2.24	2.63	3.08	0	6	17	8	6
1893.....	72.8	100	40	1.99	2.55	1.89	1.53	0	4	18	10	3
1894.....	77.0	111	39	1.64	1.00	1.59	2.33	0	5	14	16	1
1895.....	75.3	104	46	4.02	5.45	3.51	3.09	0	8	15	11	5
1896.....	76.6	108	41	3.13	3.32	3.25	2.82	0	6	17	10	4
1897.....	74.1	108	41	2.37	2.48	2.23	2.39	0	6	19	9	3
1898.....	75.8	103	44	3.13	2.93	2.88	3.57	0	5	17	10	4
1899.....	78.8	107	49	3.13	4.19	2.76	2.45	0	7	18	10	3
1900.....	80.3	105	52	3.55	2.99	4.79	2.87	0	6	19	9	3
1901.....	78.4	109	47	2.05	1.12	2.74	2.29	0	5	19	9	3
1902.....	75.0	103	47	6.06	5.66	6.79	5.74	0	10	14	11	6
1903.....	74.5	102	43	5.00	6.54	5.01	3.44	0	10	16	11	4
1904.....	73.7	100	43	5.40	5.61	5.84	4.76	0	8	16	10	5
1905.....	76.4	99	48	4.68	4.19	5.90	3.94	0	8	17	7	5
1906.....	76.6	101	40	4.70	3.99	5.10	5.01	0	11	14	10	7
1907.....	77.3	109	47	3.89	3.92	3.90	3.85	0	9	17	8	6
1908.....	76.4	102	46	3.46	3.63	3.61	3.14	0	8	17	9	5
1909.....	79.5	110	40	0.60	0.31	0.67	0.81	0	2	24	6	1
1910.....	74.7	103	40	2.92	2.63	3.56	2.57	0	6	15	9	7
1911.....	75.4	109	41	4.33	2.81	4.97	5.21	0	7	15	8	8
1912.....	76.2	104	41	4.04	4.77	3.42	3.93	0	9	17	8	6
1913.....	82.8	110	41	1.09	1.24	0.67	1.37	0	3	22	7	2
1914.....	78.0	106	49	4.25	3.73	4.53	4.48	0	9	15	9	7
1915.....	69.8	98	37	8.19	4.99	7.57	12.02	0	12	12	9	10
1916.....	79.2	107	41	4.09	5.39	2.55	4.33	0	7	19	7	5
1917.....	73.3	104	38	4.69	3.13	5.04	5.89	0	9	16	8	7
1918.....	81.8	111	45	3.57	3.22	2.91	4.59	0	8	17	9	5
1919.....	75.7	106	44	4.33	4.41	4.47	4.12	0	8	17	9	5
1920.....	73.1	102	43	4.69	3.56	5.94	4.56	0	9	15	8	8
1921.....	76.8	109	48	5.39	5.16	6.42	4.60	0	9	14	10	7
1922.....	77.5	107	46	2.44	2.68	1.67	2.97	0	6	18	8	5
1923.....	77.3	108	42	3.81	5.47	1.87	4.08	0	8	16	9	6
1924.....	77.2	106	48	4.11	3.66	4.50	4.18	0	7	19	8	4
1925.....	76.5	107	45	3.34	5.31	2.60	2.10	0	6	19	8	4
1926.....	77.5	106	50	5.65	4.03	6.39	6.53	0	10	15	9	7
1927.....	71.1	97	39	5.09	4.19	7.04	4.04	0	9	14	10	7
1928.....	76.4	99	45	5.48	4.37	6.75	5.33	0	9	15	10	6
1929.....	76.0	105	43	2.58	1.84	2.21	3.69	0	6	18	9	4
1930.....	78.5	114	47	1.99	2.39	1.87	1.70	0	6	16	10	5
1931.....	74.9	106	44	4.97	4.03	5.66	5.21	0	9	15	9	7
1932.....	77.2	106	46	5.70	7.82	3.86	5.42	0	9	18	9	4
1933.....	75.4	103	48	3.82	4.32	3.80	3.33	0	9	13	10	8
1934.....	80.6	115	41	4.01	3.36	2.83	5.83	0	9	14	11	6
1935.....	77.7	110	45	2.20	1.60	2.73	2.26	0	6	17	9	5
1936.....	84.6	116	43	0.84	0.90	0.91	0.72	0	4	20	8	3
Period.....	76.4	116	37	3.84	3.69	3.96	3.87	0	8	17	9	5



## Climatological Data for August 1936

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches				Number of days				Prevailing direction of wind	Observers	
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelted	With precip., .01 inch or more	Clear	Partly cloudy			Cloudy
Northern Division																				
Bethany	Harrison	916	41	84.7	+ 9.7	111	16	55	30	42	1.88	-1.94	0.81	0	7	21	9	1	sw.	A. S. Cumming
Brunswick	Chariton	652	55	86.4	+12.2	110	17	56	30	39	0.61	-3.33	0.35	0	5	15	7	9	sw.	O. K. Benecke
Chillicothe	Livingston	779	27	85.8	+10.1	114	14	55	1	44	0.13	-3.83	0.13	0	1	25	5	1	sw.	Wm. J. Olenhouse
Clifton Hill	Randolph	731	37	86.2	+10.2	111	15	56	30	40	0.69	-3.11	0.36	0	4	19	6	6	sw.	Dr. A. J. Bradsher
Columbia	Boone	740	46	85.1	+ 9.5	108	15	56	30	32	1.34	-2.26	0.91	0	5	17	10	4	s.	U. S. Weather Bureau
Conception	Nodaway	980	47	84.4	+ 9.7	110	13	57	29	47	2.01	-1.63	1.22	0	5	17	13	1	se.	Fr. Adelhelm Hess
Downing	Schuyler	876	15	83.8	+ 8.9	109	24	57	30	41	1.13	-2.51	0.73	0	6	19	9	3	s.	James Taylor
Edgerton	Platte	856	16	85.7	+10.6	113	14	50	29	47	0.11	-3.93	0.07	0	3	27	4	0	s.	Fred L. Stiff
Elsberry	Lincoln	449	5	83.1 <sup>a</sup>	.....	107	18	47	31	45	0.09	.....	0.06	0	2	10 <sup>a</sup>	16 <sup>a</sup>	2 <sup>a</sup>	sw.	Ray E. Mills
Fayette	Howard	680	56	83.9	+ 8.0	111	15	50	1	49	2.78	-0.78	1.20	0	6	11	16	4	sw.	Harry P. Mason
Fulton	Callaway	818	48	84.6	+ 8.2	109	15	50	1	45	1.47	-2.18	0.90	0	7	20	6	5	sw.	Clyde C. Herring
Gorin	Scotland	700	49	.....	.....	.....	.....	.....	.....	.....	0.50	.....	0.30	0	2	21	9	1	se.	W. L. Harker
Grant City	Worth	1,134	32	83.0	+ 8.1	110	18	52	30	43	1.54	-2.40	0.90	0	4	12	14	5	se.	Howard Rybolt
Hannibal	Marion	759	44	84.6	+ 9.6	108	14	58	31	36	0.58	-2.76	0.27	0	8	10	7	14	se.	Hannibal Water Dept.
Kansas City	Jackson	741	47	87.0	+10.4	113	14	57	30	43	0.25	-3.84	0.12	0	4	18	8	5	sw.	U. S. Weather Bureau
Kidder	Caldwell	1,020	44	84.9	+ 9.5	111	14	56	1	41	0.29	-3.67	0.12	0	3	16	13	2	sw.	Roscoe L. Terry
King City	Gentry	1,095	10	.....	.....	.....	.....	.....	.....	.....	1.14	-2.54	1.00	0	3	6	22	3	sw.	John M. Martin
Kirkville	Adair	969	47	84.2	+10.2	111	24	54	1	41	0.74	-3.38	0.52	0	3	19	11	1	sw.	Prof. J. S. Stokes
Linneus	Linn	816	4	.....	.....	.....	.....	.....	.....	.....	0.33	.....	0.24	0	3	16	14	1	sw.	J. Robert Hall
Louisiana	Pike	469	42	82.6	+ 7.7	114	13	47	31	50	0.76	-3.78	0.53	0	4	15	13	3	w.	Stark Bro's Nurseries
Macon	Macon	875	37	84.2	+ 8.1	111	16	56	1	41	0.50	-3.31	0.20	0	6	15	13	3	sw.	W. C. Brown
Maryville	Nodaway	1,169	46	84.0	+10.2	109	13	56	29	34	2.07	-1.91	1.30	0	9	17	9	5	sw.	R. B. Montgomery
Mexico	Audrain	800	47	85.2	+ 9.2	110	15	56	1	41	0.96	-2.89	0.62	0	6	24	4	3	sw.	Mrs. Abbie Snoddy
Moberly	Randolph	875	0	83.5	.....	108	15	51	1	41	0.75	.....	0.46	0	5	25	3	3	sw.	J. W. Adams
Monroe City	Monroe	748	15	.....	.....	.....	.....	.....	.....	.....	0.39	-3.93	0.25	0	3	24	3	4	n.	J. S. Conway
Oregon	Holt	1,048	80	85.1	+ 9.9	112	13	56	29	38	1.73	-2.07	0.45	0	8	19	10	2	se.	Miss Mina Wright
St. Charles	St. Charles	520	48	86.0	+ 9.2	111	19	56	31	39	1.10	-3.14	0.71	0	6	20	9	2	se.	Martin L. Comann
St. Joseph	Buchanan	957	26	85.6	+ 8.7	110	13	59	30	39	1.02	-2.48	0.49	0	9	17	9	5	s.	U. S. Weather Bureau
Shelbina	Shelby	779	43	.....	.....	.....	.....	.....	.....	.....	0.32	-3.40	0.16	0	6	1	15	2	.....	J. C. Jewett
Steffenville	Lewis	650	38	84.2	+ 7.7	109	16	53	1	40	1.30	-2.74	0.67	0	4	14	15	2	s.	Frank Hall
Tarkio	Atchison	916	33	82.5	+ 7.3	111	13	55	1	40	2.72	-1.18	1.93	0	6	19	7	5	se.	Albert Volker
Trenton	Grundy	822	40	85.4	+10.2	113	16	55	1	42	0.17	-3.71	0.17	0	1	20	11	0	s.	W. H. Estes
Unionville	Putnam	1,062	43	83.4	+ 8.6	112	22	55	29	39	0.99	-3.29	0.77	0	4	18	1	12	s.	John H. Schick
Warrenton	Warren	816	54	84.9	+ 8.4	108	15	57	1	36	1.95	-1.72	0.93	0	4	9	20	2	sw.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.	574	65	83.4	+ 8.4	106	18	60	30	33	0.78	-2.42	0.64	0	6	14	11	6	sw.	U. S. Weather Bureau
Division means and extremes				84.6	+ 9.2	114	13	47	31	50	0.90	-2.79	1.93	0	5	17	10	4	sw.	
Southwestern Division																				
Appleton City	St. Clair	853	41	86.6	+ 8.8	112	9	53	1	45	0.80	-3.16	0.69	0	3	21	7	3	sw.	Rolla Brown
Buffalo	Dallas	1,200	6	.....	.....	.....	.....	.....	.....	.....	1.33	.....	0.84	0	5	22	5	4	.....	C. M. McCallister
Caplinger Mills	Cedar	750	10	.....	.....	.....	.....	.....	.....	.....	0.58	-3.97	0.58	0	1	21	7	3	se.	Ozark Utilities Co.
Clinton	Henry	765	43	88.6	+11.0	116	16	58	29	42	0.74	-2.91	0.42	0	4	18	10	3	sw.	A. E. Derwent, M. D.
Concordia	Lafayette	784	21	.....	.....	.....	.....	.....	.....	.....	0.92	-2.93	0.90	0	2	22	4	5	sw.	Miss Ora Stratman
Dean H.	McDonald	1,000	32	85.6 <sup>a</sup>	+ 7.9	115	9	43	1	51	0.28	-3.84	0.28	0	1	17	13	1	sw.	E. S. Taylor
Eldon	Miller	934	41	85.6 <sup>a</sup>	+ 9.2	112	15	55	1	40	0.42	-3.24	.....	0	3	10 <sup>a</sup>	15 <sup>a</sup>	3 <sup>a</sup>	sw.	E. H. Shepherd
Garber	Taney	950	1	83.7	.....	111	10	49	1	49	1.24	.....	0.88	0	3	15	12	4	e.	William H. Durham
Hailey	Barry	1,350	11	.....	.....	.....	.....	.....	.....	.....	0.82	-4.12	0.82	0	1	21	6	4	ne.	A. W. Madison
Harrisonville	Cass	904	58	85.0	+ 9.1	111	9	56	29	42	0.57	-3.61	0.49	0	4	20	5	6	sw.	John H. Patterson
Jefferson City	Cole	557	46	84.5	+ 7.8	106	15	57	1	35	3.48	-0.35	2.82	0	3	20	10	1	s.	Mrs. Frank Kliegel
Lamar	Barton	980	48	86.0	+ 8.3	113	9	52	30	47	0.72	-3.57	0.60	0	2	25	4	2	sw.	Jesse A. Mann
LaMonte	Pettis	867	35	85.0	+ 7.9	110	9	55	1	43	1.93	-2.28	1.40	0	6	27	3	1	s.	J. E. Wheeler
Lebanon	Laclede	1,265	48	84.0	+ 7.9	109	14	54	1	41	1.51	-2.98	0.79	0	2	23	3	5	s.	Mrs. Lou Muleare
Lexington	Lafayette	688	51	86.2	+10.0	110	24	59	1	36	1.41	-2.11	0.81	0	6	22	8	1	sw.	Miss Carrie Loomis
Lockwood	Dade	1,078	30	86.2	+ 9.0	108	9	56	1	38	1.49	-3.21	0.76	0	4	26	3	2	sw.	Hubert A. Nieman
Marshall	Saline	779	49	86.0	+10.0	108	15	58	30	37	0.81	-3.09	0.55	0	4	24	5	2	sw.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	35	83.0	+ 7.5	108	16	53	30	41	0.47	-3.87	0.32	0	3	24	6	1	s.	Mo. Fruit Exp. Sta.
Neosho	Newton	1,011	49	85.2 <sup>a</sup>	+ 8.1	109	9	46	1	45	0.63	-3.74	0.61	0	2	26	5	0	sw.	U. S. Fisheries Sta.
Nevada	Vernon	862	43	88.6	+11.5	114	9	53	30	46	0.27	-3.50	0.27	0	1	20	8	3	sw.	T. J. Kaupp
Seligman	Barry	1,542	35	85.1	+ 8.9	110	9	56	1	35	0.41	-3.59	0.18	0	3	24	6	1	sw.	Floyd E. Fawver
Seymour (near)	Webster	1,642	30	82.2	+ 7.2	104	9	49	1	42	1.07	-3.17	0.85	0	2	22	8	1	s.	A. L. Hailey
Springfield	Greene	1,301	48	84.4	+ 8.7	105	16	63	1	30	0.78	-3.31	0.30	0	8	17	12	2	sw.	U. S. Weather Bureau
Versailles	Morgan	1,037	4	86.5	.....	112	15	54	1	45	0.85	-3.22	0.36	0	4	18	8	5	sw.	I. M. Wilson
Warrensburg	Johnson	878	49	86.4	+ 9.3	111	9	53	1	44	0.77	-3.20	0.41	0	4	19	6	6	ne.	E. A. Markey
Warsaw	Benton	687	35	86.4	+ 8.8	113	16	51	1	47	0.72	-3.90	0.32	0	5	18	6	7	se.	Everett Martin
Division means and extremes				85.5	+ 8.8	116	16	43	1	51	0.91	-3.05	2.82	0	3	21	7	3	sw.	
Southeastern Division																				
Arcadia	Iron	926	55	82.6	+ 8.3	106	18	48	31	45	0.62	-3.75	0.53	0	4	21	3	7	s.	Arcadia College
Birch Tree (near)	Shannon	1,000	41	82.9	+ 6.8	104	16	57	31	39	2.45	-2.31	2.35	0						



Daily Precipitation for August 1936

[illegible]

Continued on next page



Daily Precipitation for August 1936—Continued from preceding page

Stations	Drainage-basins	Day of month																															Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Southeastern Div.—Concluded																																	
Doniphan	Black				T.				T.										.12											.18		0.30	
Farmington	St. Francis					T.			.05										.04													0.09	
Fisk	do	.07							.11																					.06	.05	0.36	
Fredericktown	do							.10																						T.		0.40	
Goodland	Black			.10					.53																							0.63	
Greenville	St. Francis								.48																							0.48	
Jackson	Mississippi					.02	.01		.21																					.08		0.32	
Koshkonong	Black		.10						.16										.36											.08		0.70	
Leeper	do								.32		.13								.43											.03		0.91	
Marble Hill	Mississippi					.10			.20																						.05	0.35	
Meramec Park	Meramec								.81																								0.81
Morehouse	Mississippi		T.						.34																						.43		0.77
New Madrid	do	.16	.05						.10	.10																							0.58
Owensville	Gasconade						T.		.88	T.								.12			.03										.21		1.24
Parma	St. Francis								.20																								0.20
Poplar Bluff	Black								.45	.01																							0.53
Rolla	Meramec						T.		1.78																								1.78
St. Louis***	Mississippi			T.	T.	.06		T.	.02								.47	.29							T.						.01		0.85
St. Louis University*	do			T.	T.	.06			.02								.30	.31						T.							.02		0.71
Salem	Meramec				.10	T.			1.89																								1.90
Sikeston	Mississippi								.15																							.20	0.35
Union	Meramec					.06			.62								1.17																0.88
Valley Park	do	T.		.12	T.	.09			.17								.31	T.								.04				.06	.04		1.95
Williamsville	Black								.51	.03																					.10		0.64
Willow Sprgs. (near)	White					.02			.07										.04												.02		0.15
Cairo, Ill.***	Mississippi	.07	T.			T.	T.		.01																						.04		0.12

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation.   
 \* Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight.   
 † Estimated.   
 ‡ Partially estimated.   
 || Incomplete.   
 T. Trace, or less than 0.01 inch.   
 † Precipitation in the next following measurement; separate dates of fall not recorded.   
 ‡ Precipitation is for 24-hour period, midnight to midnight.   
 † Estimated.   
 ‡ Partially estimated.   
 || Incomplete.

Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for August 1936

(See precipitation data in table on preceding page)

Station	Data	Day of month																															Monthly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Lakeside ..... (Osage Dam)	Evaporation .....	352	338	233	292	313	076	130	101	296	335	352	183	399	541	462	471	294	191	449	445	376	468	425	361	392	420	341	393	346	289	253	10,347
	Mean temperature ..	72	71	78	81	78	75	72	84	87	83	79	84	87	92	94	92	88	86	90	89	88	92	90	86	86	88	86	85	72	71	73	83.3
	Wind movement ..	41	53	52	36	42	27	40	39	59	28	35	38	41	63	87	74	48	40	82	67	53	83	66	49	59	77	55	65	103	58	50	1,710

Observations taken at 7.30 a. m. Wind movement corrected to true velocities. For description see April 1932 report.

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## HEAT AND DROUGHT OF 1936 AND OTHER YEARS

A summary of drought records in Missouri from 1870 to 1930 is given in the Annual Summary of Climatological Data for 1930, pages 54-55, and an article on "Heat and Drought of 1934 and Other Years" appears on page 40 of Climatological Data for August 1934. Another great drought has come in 1936, and the present article gives comparative data and remarks upon the three outstanding heat-drought spells of record, which were those of 1901, 1934, and 1936.

The 1901 spell ranks third in order of severity, although not far below 1934 and 1936. It is difficult to decide whether 1934 or 1936 stands first in severity. Judging by the weather records alone, 1934 was worse in some respects and 1936 worse in others. The rainfall and the water in the principal rivers were less in 1936 than in 1934, but the heat in 1934 averaged for the three summer months a fraction of a degree (0.3°, hardly appreciable) higher than in 1936. The early onset of the heat was stronger in 1934, when June temperature averaged the highest ever known for June. The persistence and duration of the heat were greater in 1936, but June was mostly only moderately warm.

Judging from the yield of corn, 1934 was more destructive than 1936; for the average yield per acre in 1934 is reported by the U. S. Agricultural Statistician as 6.5 bushels, while 1936 (estimate of Sept. 1, and not final) shows 8 bushels per acre. There were factors in 1936 probably more favorable to crops, especially corn, than in 1934, such as the ideal conditions early in the season for planting, germination, and cultivation. Possibly, also, the great flood of May-June 1935 stored an unusual supply of moisture in the bottom lands along the Missouri River and its tributaries, some of which was still available in July

1936. Furthermore, the severe cold of January and February 1936, with heavy snows in some northwestern areas, conserved ground moisture. In some parts of the State (mostly central and southwestern) 1936 was undoubtedly worse than 1934; in some other parts 1934 was probably the more severe. On the whole, it is believed that 1936 was slightly more severe than 1934 and should be ranked as the worst drought of record in Missouri.

It should be remembered that in none of the great heat-drought periods were the conditions uniform over the State. For example, in 1934 and 1936 the lower southeastern part of Missouri suffered much less than the other sections, and in 1936 some northwestern localities suffered less than some central areas.

Comparative temperature and rainfall data for the three great droughts are given below.

State average temperature for each summer month and for the summer as a whole:

1901.—June, 77.9°; July, 85.4°; August, 78.4°; for the summer, 80.6°.  
 1934.— " 80.4°; " 86.2°; " 86.6°; " " 82.4°.  
 1936.— " 76.5°; " 85.3°; " 84.6°; " " 82.1°.

Highest temperature recorded in the State.—In 1901, 116°, July 22, at Marble Hill; in 1934, 117°, July 18, at Louisiana; in 1936, 118°, July 15, at Clinton, and July 18 at Lamar.

Number of days (average for each Division and for the State) with maximum temperature of 100° or higher.—In 1901: Northern Division, 23; Southwestern Division, 31; Southeastern Division, 22; for the State, 25. In 1934: Northern Division, 41; Southwestern, 38; Southeastern, 25; for the State, 35. In 1936: Northern Division, 44; Southwestern, 42; Southeastern, 28; for the State, 38.

Period of duration of the hot spell.—In 1901, June 14-August 3; in 1934, June 24-August 10; in 1936, June 16-Sept. 15.

Warmest week.—In 1901, July 18-24; in 1934, July 19-25; in 1936, July 9-15.

State average precipitation, January to May, inclusive.—In 1901, 11.25 inches; in 1934, 9.66 inches; in 1936, 8.75 inches. (Normal for this period, 16.31 inches).

State average rainfall for the summer months, in inches:

1901.—June, 2.02; July, 2.02; August, 2.05; for the summer, 6.09.  
 1934.— " 2.82; " 1.18; " 4.01; " " 8.01.  
 1936.— " 1.42; " 1.52; " 0.84; " " 3.78.

(Normal rainfall for June, 4.61; July, 3.68; August, 3.84; summer, 12.13).

Number of days with rain.—In 1901: June, 6; July, 5; August, 5; for the summer, 16. In 1934: June, 7; July, 4; August, 9; for the summer, 20. In 1936: June, 4; July, 3; August, 4; for the summer, 11.



## Daily Temperatures for August 1936

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
Northern Division																																		
Brusselswick .....	Maximum...	95	95	96	101	93	84	81	97	107	104	93	106	108	108	109	106	110	108	109	104	105	106	106	110	106	107	105	98	86	90	95	100.9	
Brusselswick .....	Minimum...	60	64	65	76	69	61	65	67	69	75	74	70	77	82	80	78	75	79	81	75	82	78	76	71	78	79	78	76	59	56	58	72.0	
Chillicothe §§ .....	Maximum...	94	97	98	98	81	82	78	98	110	102	95	109	111	114	114	113	112	110	111	105	109	107	107	111	110	110	107	87	89	91	91	101.6	
Chillicothe §§ .....	Minimum...	55	59	65	73	68	58	61	64	67	71	71	68	77	82	82	78	75	77	78	75	77	78	69	67	78	77	73	55	56	56	69.9		
Columbia .....	Maximum...	91	90	92	97	82	85	82	92	100	97	93	102	104	105	105	102	106	109	111	105	102	104	101	102	104	103	93	85	86	94	97.4		
Columbia .....	Minimum...	60	65	65	76	66	65	69	67	74	77	73	70	79	80	81	73	74	79	83	74	81	85	82	75	79	80	81	65	59	56	65	72.8	
Fayette .....	Maximum...	93	93	95	97	80	80	80	95	103	100	94	105	106	105	105	105	106	109	111	105	102	104	103	105	102	104	103	93	85	86	94	97.4	
Fayette .....	Minimum...	50	57	61	70	67	62	62	66	69	75	72	64	73	72	73	71	71	71	75	72	74	77	74	68	72	76	75	74	57	52	50	68.0	
Grant City .....	Maximum...	93	95	98	85	78	85	81	94	108	96	94	106	106	105	105	107	107	110	107	106	103	101	105	107	107	109	107	106	77	99	88	89	99.8
Grant City .....	Minimum...	60	63	67	71	66	60	64	65	65	71	70	71	82	85	75	74	75	79	74	68	69	71	68	70	79	69	75	67	53	52	53	68.7	
Hannibal .....	Maximum...	91	90	93	92	86	83	85	90	104	100	93	103	106	108	102	105	103	107	107	101	104	105	102	106	104	106	98	93	84	83	94	97.7	
Hannibal .....	Minimum...	59	63	66	72	62	63	65	68	71	67	69	78	81	79	80	78	75	78	83	71	82	85	79	75	77	79	75	71	59	59	58	71	6
Kansas City .....	Maximum...	90	93	97	101	79	80	79	98	110	102	99	109	110	113	110	104	108	108	107	103	104	104	104	109	107	106	104	91	86	90	94	100.0	
Kansas City .....	Minimum...	63	61	71	75	69	61	66	68	67	73	72	75	86	86	78	81	82	83	82	77	84	82	73	74	82	82	86	71	60	57	67	74.0	
Kldder .....	Maximum...	92	95	97	97	86	80	78	95	108	104	93	107	110	111	108	109	108	108	107	102	105	102	107	107	105	104	98	86	88	90	99.6		
Kldder .....	Minimum...	56	59	63	72	67	57	61	64	67	71	70	69	79	84	81	78	78	79	84	74	77	73	69	68	78	74	79	70	56	57	60	70.2	
Klrksville .....	Maximum...	93	94	96	90	83	88	88	91	108	101	92	107	106	106	105	107	108	106	106	106	101	103	103	103	111	106	108	102	92	87	89	92	99.1
Klrksville .....	Minimum...	54	59	66	66	61	58	61	66	68	70	70	75	77	83	78	72	78	74	77	72	78	79	70	70	70	70	72	74	57	58	65	69.3	
Louisiana .....	Maximum...	98	87	100	96	70	80	83	93	105	100	95	104	114	110	101	107	103	106	106	103	106	105	106	106	103	106	99	87	85	95	98.5		
Louisiana .....	Minimum...	48	55	60	66	66	64	55	68	67	73	60	65	70	80	84	73	72	71	72	71	71	71	71	73	72	72	72	72	72	72	72	72	
Nacon§§ .....	Maximum...	91	92	95	95	68	82	83	93	107	98	91	106	107	107	109	111	109	106	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108
Nacon§§ .....	Minimum...	56	60	64	69	66	60	61	66	67	72	68	65	70	80	77	76	72	75	81	71	72	81	76	70	77	80	74	73	58	59	59	69.5	
Maryville .....	Maximum...	93	97	95	89	88	83	79	92	106	98	95	106	109	108	106	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108
Maryville .....	Minimum...	61	63	66	70	65	63	64	65	68	72	73	73	83	83	76	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	
Mexico §§ .....	Maximum...	93	92	95	103	78	84	85	95	105	98	97	105	106	105	110	108	107	106	107	105	101	105	107	107	104	107	105	100	99	88	96	100.2	
Mexico §§ .....	Minimum...	55	63	64	73	68	63	62	62	69	72	67	65	72	78	81	71	74	75	73	71	78	83	79	74	76	77	80	79	58	58	60	70.3	
Moberly .....	Maximum...	91	90	93	96	80	92	81	92	104	97	91	103	104	106	108	108	108	107	105	106	101	104	104	105	105	102	104	103	89	85	86	93	97.9
Moberly .....	Minimum...	51	57	62	70	67	62	58	66	67	73	69	62	72	79	78	75	70	78	79	79	79	79	79	79	79	79	79	79	79	79	79	79	
Oregon .....	Maximum...	93	97	96	95	80	80	75	94	107	103	96	109	112	109	108	108	108	109	109	110	100	102	101	101	101	107	108	103	94	97	55	55	69.1
Oregon .....	Minimum...	61	65	69	70	65	63	64	65	69	75	72	76	83	82	80	76	79	77	76	70	100	100	102	101	101	107	108	103	94	97	55	55	69.1
St. Joseph .....	Maximum...	92	95	93	96	77	81	74	93	108	102	97	107	110	108	108	105	108	107	107	101	101	101	101	101	101	101	101	101	101	101	101	101	101
St. Joseph .....	Minimum...	63	63	69	69	67	63	66	67	69	76	74	76	83	88	83	79	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	
Trenton .....	Maximum...	94	96	96	95	85	85	83	97	109	100	95	107	111	112	109	113	111	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
Trenton .....	Minimum...	55	58	64	65	63	60	60	65	67	78	70	68	78	81	80	78	74	78	82	75	76	75	76	75	76	76	76	76	76	76	76	76	
Unionville §§ .....	Maximum...	94	96	96	86	73	87	71	96	102	96	89	107	107	109	109	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107
Unionville §§ .....	Minimum...	59	60	65	69	63	60	63	66	70	69	71	68	72	82	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	
Warrenton .....	Maximum...	93	88	92	102	91	84	87	92	102	98	93	103	104	105	108	103	106	106	103	103	104	104	104	104	104	104	104	104	104	104	104	104	104
Warrenton .....	Minimum...	57	65	63	70	70	66	66	61	71	75	66	70	76	78	82	71	72	77	82	73	80	81	76	74	75	75	80	81	82	60	61	71.6	
Southwestern Division																																		
Appleton City .....	Maximum...	95	95	103	104	95	81	87	105	112	107	101	109	110	110	111	111	110	108	108	105	106	106	108	108	105	106	105	99	91	93	98	103.0	
Appleton City .....	Minimum...	53	58	61	75																													





## CLIMATOLOGICAL DATA

19

## MISSOURI SECTION

ROSCOE NUNN  
ST. LOUIS, MO.

Vol. XL

SEPTEMBER 1936

No. 9

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## GENERAL SUMMARY

The outstanding feature of this month was the complete break-up of the most severe drought of record in the climatic history of the State. This break-up began with the general heavy soaking rains of the 1st-2d and was augmented by copious showers at frequent intervals during the remainder of the month.

All vegetation was revived and water supplies adequately replenished, while the deficiency in subsoil moisture was materially relieved, although not nearly restored, and was more than sufficient for current needs at the close of the month.

Although the abnormal heat, which had prevailed almost continuously since May, was not immediately relieved by the break-up of drought conditions, this was accomplished by the return to normal, or below, temperatures on the 16th and throughout the remainder of the month temperatures were generally favorable.

Temperatures were unusually high the first half of the month, reaching a maximum of near 100°, or higher, on several days between the 5th and 15th. An abrupt change to cooler occurred on the 16th and temperatures were mostly below normal thereafter, except a warm period from the 20th to 23d. The coolest period was from the 24th to the 30th during which time the minimum temperatures for the month occurred, ranging from 37° in the northern division to 43° and 38° in the southwestern and southeastern divisions, respectively. It was the fifth consecutive month with above-normal warmth and the warmest of its name since 1933, and the sixth warmest September of record. The temperature distribution was quite uniform over the whole State, all stations having above-normal averages. The greatest excess occurred in the northern division, with 4.6° above normal, which is less than one degree above the excess shown in the other two divisions. The extremes of temperature were within the limits of other Septembers but the maximum of 109° this month has been equalled or exceeded only twice in the past forty-nine years, viz., 110° in 1925 and 109° in 1913.

The rainfall this month was the heaviest of any September since 1926 and the second heaviest of record, (years 1888-1936), and the first month with above-normal rainfall since November 1935. The rainfall was uniformly above normal over the entire State, except locally in Cape Girardeau County. The southwestern division received the heaviest amount, 9.98 inches, or 5.62 inches more than normal, and the southeastern division the least, 7.12 inches, or 3.36 inches more than normal. The rains were general and frequent and in many cases excessive, causing small streams and creeks to flow for the first time since early summer, and reach bankful locally.

The month was unusually free from damaging storms and the absence of frost or freezing temperatures was very favorable to all agricultural interests, affording an opportunity to offset some of the serious effects of the drought by extending the growing season of late fall crops and garden truck.

All growing crops were flourishing at the close of the month and pastures were revived to where they were again able to maintain livestock with a minimum of dry feeding, resulting in a decided saving of this feed for winter use. Much wheat, rye, and barley were sown for fall pasture and were up and growing

nicely. About one-fourth of the wheat acreage had been sown by the end of the month. Garden truck was greatly revived and promising but it was doubtful if it could produce much this late in the season. Tomatoes were rank and vigorous but were not setting fruit.

(Continued on page 44)

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)				Wind				Relative humidity			
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	7 a. m.	12 noon	7 p. m.
Columbia.....	29.99	30.37	17	29.50	2	7.7	26	se.	15	82	61	68
Kansas City.....	29.94	30.37	16	29.42	1	9.0	31	nw.	8	83	58	60
St. Joseph.....	29.94	30.39	17	29.46	1	7.8	32	nw.	8	84	58	61
St. Louis.....	29.98	30.35	17	29.55	2	11.1	33	sw.	23	79	58	61
Springfield.....	29.97	30.30	17	29.55	1	9.5	28	sw.	1	81	57	60
Cairo, Ill.....	29.99	30.27	17	29.62	2	7.6	30	n.	9	86	60	70
Keokuk, Iowa..	29.98	30.42	17	29.57	2	7.4	21	n.	16	80	56	61

## COMPARATIVE DATA FOR SEPTEMBER

Year	Temperature			Precipitation					Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, State	Average for State	Precip. .01 in. or more	Clear	Partly cloudy
1888.....	65.2	97	28	1.01	1.13	0.87	1.02	0	4	..	..	..
1889.....	64.7	94	32	4.68	5.55	4.66	3.83	0	11	..	..	..
1890.....	63.7	98	30	4.36	3.25	5.49	4.34	0	5	..	..	..
1891.....	70.6	104	34	0.72	0.53	0.90	0.72	0	6	..	..	..
1892.....	67.8	97	32	2.46	2.73	2.71	1.93	0	4	19	6	5
1893.....	69.9	107	26	4.07	3.50	3.96	4.74	0	6	17	7	6
1894.....	68.5	101	34	4.94	4.16	6.42	4.23	0	8	13	11	6
1895.....	71.8	104	24	2.38	2.04	2.43	2.65	0	4	19	8	3
1896.....	65.0	101	28	4.09	4.67	3.92	3.69	0	10	11	10	9
1897.....	74.3	105	27	0.67	0.97	0.61	0.43	0	2	23	5	2
1898.....	70.9	103	37	6.70	6.76	7.25	6.10	0	9	15	9	6
1899.....	67.4	108	21	1.96	2.27	1.79	1.81	0	4	20	6	4
1900.....	71.1	100	29	4.59	4.77	5.56	3.44	0	10	13	10	7
1901.....	68.9	103	27	2.16	2.41	2.75	1.31	0	6	18	8	4
1902.....	63.2	95	30	4.63	4.74	5.36	3.79	0	10	15	6	9
1903.....	66.6	98	32	4.16	5.64	3.56	3.28	0	8	17	6	7
1904.....	69.6	96	34	3.77	4.72	2.78	3.82	0	7	16	8	6
1905.....	69.6	98	41	7.40	8.20	8.36	5.64	0	10	15	6	9
1906.....	71.9	98	36	4.53	3.54	3.75	6.31	0	11	15	8	7
1907.....	68.9	101	31	2.06	2.35	1.62	2.20	0	6	18	7	5
1908.....	71.6	99	28	2.15	1.49	2.69	2.27	T.	4	18	8	4
1909.....	68.7	105	28	4.48	5.30	3.35	4.79	0	8	14	6	6
1910.....	69.5	97	34	5.45	5.90	5.44	4.01	0	10	18	6	10
1911.....	73.7	105	39	6.27	8.17	5.98	4.65	0	11	13	7	10
1912.....	68.6	105	27	3.11	2.72	2.87	3.74	0	6	17	5	8
1913.....	69.4	109	27	4.75	3.74	4.64	5.88	0	9	13	7	10
1914.....	69.6	99	35	6.06	7.19	6.01	4.98	0	9	15	8	7
1915.....	70.6	98	34	5.18	6.21	6.93	2.40	0	7	16	7	4
1916.....	67.8	101	27	2.97	2.73	3.18	2.99	0	6	19	7	4
1917.....	67.9	101	33	2.76	2.97	3.64	1.66	0	5	19	6	5
1918.....	62.3	96	29	4.83	4.11	5.44	4.95	0	7	17	6	7
1919.....	71.4	104	38	3.14	4.13	1.95	3.34	0	5	20	6	4
1920.....	70.0	100	31	4.60	4.37	5.78	3.64	0	9	17	7	6
1921.....	73.4	104	34	6.94	8.05	7.03	5.74	0	13	13	9	8
1922.....	71.7	107	31	3.10	3.95	3.62	1.74	0	5	21	6	4
1923.....	68.7	98	33	4.44	4.84	4.75	3.74	0	11	12	9	9
1924.....	64.0	96	29	3.79	3.41	4.65	3.40	0	8	14	8	10
1925.....	74.6	110	45	6.56	5.84	6.48	7.37	0	13	12	7	11
1926.....	69.3	97	27	8.64	11.74	9.12	5.06	0	13	12	7	11
1927.....	71.6	102	29	3.72	3.11	3.41	4.65	0	8	17	7	3
1928.....	65.0	95	28	2.50	5.36	1.62	0.53	0	5	20	7	3
1929.....	67.4	98	33	3.16	3.16	2.83	3.48	0	8	13	10	7
1930.....	71.3	105	37	4.28	2.86	5.48	4.49	0	8	16	7	4
1931.....	75.0	104	36	3.91	5.97	3.18	2.58	0	7	17	7	4
1932.....	67.8	99	33	2.56	2.08	2.04	3.57	0	6	17	8	5
1933.....	74.6	102	36	4.69	3.00	4.92	6.16	0	9	16	8	6
1934.....	65.6	95	32	7.89	7.49	7.79	6.89	0	12	12	8	10
1935.....	68.1	98	33	3.51	4.90	3.13	3.10	0	6	20	4	6
1936.....	73.6	109	37	8.62	8.78	9.98	7.12	0	11	11	9	10
Period.....	69.2	110	21	4.18	4.43	4.36	3.76	T.	8	16	7	7



## Climatological Data for September 1936

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches				Number of days				Prevailing direction of wind	Observers	
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelting	With precip., .01 inch or more	Clear	Partly cloudy			Cloudy
Northern Division																				
Bethany.....	Harrison.....	916	41	73.0	+ 5.9	102	6	48	24†	36	7.31	+2.75	2.53	0	12	16	7	7	sw.	A. S. Cumming
Brunswick.....	Chariton.....	652	55	74.4	+ 7.4	103	6	50	25†	32	10.90	+6.09	2.58	0	13	8	10	12	se.	O. K. Benecke
Chillicothe.....	Livingston.....	779	27	72.2	+ 3.6	105	6	46	24	40	9.02	+4.24	2.50	0	14	14	9	7	sw.	Wm. J. Olenhouse
Clifton Hill.....	Randolph.....	731	37	74.4	+ 5.3	103	6	49	25	39	6.60	+2.06	1.81	T.	11	9	9	12	sw.	Dr. A. J. Bradsher
Columbia.....	Boone.....	740	46	72.9	+ 4.7	100	11	50	30	29	10.21	+5.86	2.47	0	11	11	7	12	se.	U. S. Weather Bureau
Conception.....	Nodaway.....	980	47	71.8	+ 4.6	100	11	48	27†	33	7.44	+2.80	2.09	0	11	8	16	6	se.	Fr. Adelhelm Hess
Downing.....	Schuyler.....	876	15	71.2 <sup>a</sup>	+ 3.6	101	11	48	24†	39	12.03	+6.84	2.59	0	13	14 <sup>a</sup>	7 <sup>a</sup>	8 <sup>a</sup>	sw.	Everett Rowe
Edgerton.....	Platte.....	856	16	73.1	+ 5.2	104	6	46	24	37	8.12	+3.53	2.43	0	15	18	1	11	s.	Fred L. Stiff
Elsberry.....	Lincoln.....	449	5	72.4	.....	101	11	40	25	33	8.87	.....	3.11	0	9	6	14	10	sw.	Ray E. Mills
Fayette.....	Howard.....	680	56	73.9	+ 5.8	104	6†	44	25	36	6.45	+1.49	1.75	0	8	6	13	11	sw.	Harry P. Mason
Fulton.....	Callaway.....	818	48	72.6	+ 3.7	101	11	44	25	33	8.91	+4.42	3.55	0	12	13	5	12	s.	Clyde C. Herring
Gorin.....	Scotland.....	700	49	.....	.....	.....	.....	.....	.....	11.46	.....	+6.79	3.26	0	12	15	8	7	ne.	W. L. Harker
Grant City.....	Worth.....	1,134	32	70.5	+ 3.5	97	6†	44	24	34	7.60	+2.91	2.16	0	11	7	11	12	sw.	Howard Rybolt
Hannibal.....	Marion.....	759	44	72.8	+ 5.1	101	11	48	25	29	7.38	+3.41	2.01	0	12	8	7	15	se.	Hannibal Water Dept.
Kansas City.....	Jackson.....	741	47	73.6	+ 4.7	104	6	49	28	30	7.99	+3.43	1.70	0	16	7	10	13	s.	U. S. Weather Bureau
Kidder.....	Caldwell.....	1,020	44	71.6	+ 4.3	101	6	45	30	32	8.66	+3.46	1.35	0	18	10	14	6	se.	Roscoe L. Terry
King City.....	Gentry.....	1,095	10	.....	.....	.....	.....	.....	.....	9.75	.....	+4.33	2.94	0	12	2	21	7	sw.	John M. Martin
Kirksville.....	Adair.....	969	47	71.7	+ 5.4	101	6†	37	25	34	13.91	+8.73	4.65	0	11	7	15	8	s.	Prof. J. S. Stokes
Linneus.....	Linn.....	816	4	.....	.....	.....	.....	.....	.....	9.94	.....	.....	2.34	0	16	12	9	9	ne.	J. Robert Hall
Louisiana.....	Pike.....	469	42	72.2	+ 4.2	103	11	40	25	36	10.17	+5.74	3.70	0	10	14	6	10	w.	Stark Bro's Nurseries
Macon.....	Macon.....	875	37	71.8	+ 3.9	104	11	48	24†	38	7.88	+3.44	2.41	0	12	8	11	11	ne.	C. B. Brown
Maryville.....	Nodaway.....	1,169	46	70.4	+ 4.8	100	11	47	24†	30	6.89	+2.21	2.86	0	10	12	7	11	se.	M. B. Montgomery
Mexico.....	Audrain.....	800	47	72.0	+ 3.5	102	11	48	25	35	9.68	+4.71	2.57	0	13	15	2	13	sw.	Mrs. Abbie Snoddy
Moberly.....	Randolph.....	875	0	71.6	.....	100	11	45	27	33	8.21	.....	2.67	0	12	14	8	8	se.	J. W. Adams
Monroe City.....	Monroe.....	748	15	.....	.....	.....	.....	.....	.....	5.52	.....	+0.70	1.38	0	10	10	10	10	s.	J. S. Conway
Oregon.....	Holt.....	1,048	80	71.5	+ 4.4	99	6	46	28	31	9.05	+3.95	2.35	0	12	16	6	8	sw.	Miss Mina Wright
St. Charles.....	St. Charles.....	520	48	74.6	+ 6.3	102	12†	46	25	34	6.19	+2.35	3.05	0	9	12	10	8	se.	Martin L. Comann
St. Joseph.....	Buchanan.....	957	26	72.3	+ 3.4	102	6	48	27	31	8.14	+4.27	2.45	0	16	13	5	12	s.	U. S. Weather Bureau
Shelbina.....	Shelby.....	779	43	.....	.....	.....	.....	.....	.....	5.91	.....	+0.97	1.46	0	12	.....	.....	.....	.....	J. C. Jewett
Steffenville.....	Lewis.....	650	38	72.1	+ 3.1	100	6†	47	24	31	12.12	+7.62	4.70	0	10	12	8	10	s.	Frank Hall
Tarkio.....	Atchison.....	916	33	69.3	+ 3.0	96	6†	45	28	36	7.53	+3.29	3.11	0	10	13	6	11	se.	Albert Volker
Trenton.....	Grundy.....	822	40	73.5	+ 6.3	104	6	48	17†	36	8.77	+4.02	3.09	0	13	13	13	4	s.	W. H. Estes
Unionville.....	Putnam.....	1,062	43	69.8	+ 2.7	101	6†	45	24	43	10.26	+5.17	2.30	0	10	11	5	14	s.	John H. Schick
Warrenton.....	Warren.....	816	54	74.0	+ 5.0	101	11	48	25	31	10.44	+6.08	3.87	0	14	6	14	10	sw.	Prof. A. W. Ebeling
Keokuk, Iowa.....	Lee, Ia.....	574	65	71.6	+ 4.1	100	11	50	28	27	7.59	+3.75	4.45	0	13	8	8	14	e.	U. S. Weather Bureau
<b>Division means and extremes</b>	<b>and extremes</b>	<b>.....</b>	<b>.....</b>	<b>72.3</b>	<b>+ 4.6</b>	<b>105</b>	<b>6</b>	<b>37</b>	<b>25</b>	<b>43</b>	<b>8.76</b>	<b>+4.33</b>	<b>4.70</b>	<b>0</b>	<b>12</b>	<b>11</b>	<b>9</b>	<b>10</b>	<b>s.</b>	
Southwestern Division																				
Appleton City.....	St. Clair.....	853	41	74.6	+ 4.2	106	6	45	25	38	8.97	+4.59	2.12	0	13	12	6	12	sw.	Rolla Brown
Buffalo.....	Dallas.....	1,200	6	.....	.....	.....	.....	.....	.....	10.12	.....	.....	4.77	0	9	7	15	8	.....	C. M. McCallister
Caplinger Mills.....	Cedar.....	750	10	.....	.....	.....	.....	.....	.....	9.37	.....	+5.65	2.63	0	12	9	8	13	se.	Ozark Utilities Co.
Clinton.....	Henry.....	765	43	74.8	+ 4.0	107	6	50	30	37	10.47	+5.95	2.06	0	15	9	14	7	se.	A. E. Derwent, M. D.
Concordia.....	Lafayette.....	784	21	.....	.....	.....	.....	.....	.....	8.69	.....	+4.19	2.31	0	13	13	3	14	ne.	Miss Ora Stratman
Dean †.....	McDonald.....	1,000	32	76.8	+ 5.8	105	6	43	30	34	14.31	+10.43	3.65	0	13	3	18	9	sw.	K. S. Taylor
Eldon.....	Miller.....	934	41	71.2	+ 1.8	99	6†	46	25†	30	14.02	+9.40	3.42	0	15	.....	.....	.....	.....	E. H. Shepherd
Garber.....	Taney.....	960	1	75.0	.....	103	10	42	30	41	10.15	.....	2.49	0	13	8	7	15	e.	William H. Durham
Hailey.....	Barry.....	1,350	11	.....	.....	.....	.....	.....	.....	8.60	.....	+4.83	.....	0	13	11	3	16	sw.	A. W. Madison
Harrisonville.....	Cass.....	904	58	71.2	+ 2.7	104	6	49	28†	33	9.64	+4.74	2.80	0	15	12	7	11	sw.	John H. Patterson
Jefferson City.....	Cole.....	557	46	71.5	+ 2.2	100	11	47	25	34	10.02	+5.79	3.00	0	14	16	5	9	s.	Mrs. Frank Kliegel
Lamar.....	Barton.....	980	48	75.4	+ 4.6	105	6	48	30	43	7.81	+3.26	4.00	0	11	11	9	10	sw.	Jesse A. Mann
LaMonte.....	Pettis.....	867	35	73.2	+ 3.0	102	6	48	24†	34	9.98	+4.85	2.20	0	13	15	7	8	s.	J. E. Wheeler
Lebanon.....	Laclede.....	1,265	48	72.8	+ 3.4	100	14	46	29†	36	9.90	+5.41	2.51	0	8	13	6	11	se.	Mrs. Lou Mulcare
Lexington.....	Lafayette.....	688	51	72.8	+ 4.0	103	6	49	28	32	9.25	+4.48	2.05	0	17	11	13	6	s.	Miss Carrie Loomis
Lockwood.....	Dade.....	1,078	30	75.8	+ 4.9	103	7	48	30	34	11.94	+7.16	3.48	0	12	12	9	9	sw.	Hubert A. Nieman
Marshall.....	Saline.....	779	49	74.2	+ 5.4	101	6†	49	30	24	6.79	+1.29	1.58	0	12	12	9	9	se.	Sec. Chamber of Commerce
Mountain Grove.....	Wright.....	1,463	35	73.9	+ 5.0	99	11†	47	30	39	7.45	+3.39	2.50	0	13	5	16	9	se.	Mo. Fruit Exp. Sta.
Neosho.....	Newton.....	1,011	49	75.6	+ 5.1	100	6	43	30	30	9.01	+4.72	2.96	0	13	16	5	9	sw.	U. S. Fisheries Sta.
Nevada.....	Vernon.....	862	43	77.0	+ 7.5	109	6	49	25	39	9.17	+4.86	1.70	0	11	9	15	6	sw.	T. J. Kaupp
Sellman.....	Barry.....	1,542	35	74.7 <sup>b</sup>	+ 5.1	98	1	48	25†	28	10.54	+6.86	2.70	0	13	14 <sup>a</sup>	6 <sup>a</sup>	9 <sup>a</sup>	sw.	Floyd E. Fawver
Seymour(near).....	Webster.....	1,642	30	73.0	+ 4.2	97	7	45	30	30	5.78	+1.76	1.95	0	12	13	6	11	s.	A. L. Hailey
Springfield.....	Greene.....	1,301	48	74.2	+ 5.3	97	6	48	30	27	7.29	+3.77	2.37	0	14	9	13	8	s.	U. S. Weather Bureau
Versailles.....	Morgan.....	1,037	4	73.8	.....	101	6†	49	30	30	11.99	+7.43	2.78	0	15	10	8	12	s.	I. M. Wilson
Warrensburg.....	Johnson.....	878	49	73.6	+ 3.4	101	6†	51	27†	41	8.34	+4.16	2.29	0	9	12	6	12	sw.	E. A. Markey
Warsaw.....	Benton.....	687	35	74.5	+ 4.0	101	6†	47	25	35	12.40	+7.37	3.62	0	15	11	8	11	w.	Everett Martin
<b>Division means and extremes</b>	<b>and extremes</b>	<b>.....</b>	<b>.....</b>	<b>74.1</b>																



## Daily Precipitation for September 1936

Stations	Drainage-basins	Day of month																														Total				
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30					
Northern Division																																				
Amity	Grand	.46	.16			1.18		.16		.04	T.		.21	.31		1.56										.03		.83	1.58	.01	.04	.24		6.81		
Bethany	do	.04	.29		.40	.30		.29					.42	.35		1.68									.14	.50	T.	2.53	.05		.82		7.31			
Bowling Green	Mississippi			.13	.05									.55		.17	.43		T.	.04						.50		.09	1.60	1.70	.33	.09	9.68			
Brunswick	Grand			.25								.20		1.63		1.57	.42		.04							.03	.85		.88	1.40	.95	.17	.12	10.90		
Canton	Mississippi			.14	.08									.01	1.63		1.17	.21								.02			1.19	2.48	.22	.34	.09	8.89		
Chillicothe	Grand	.02	.53			.07				.01		.14	.66	1.22	T.	2.50										T.	T.	.08	1.26	1.67	.13	.11	.62	9.02		
Clifton Hill	Chariton	1.78												.01		.89	1.07									1.48			2.23	.87	1.87	.05	T.	10.21		
Columbia	Missouri	1.68		T.						.04		.02	.01	.01		.42	.80												2.01		T.	T.	.06	7.44		
Conception	do	.12	.37		.43	.92	T.	.22					.02	.42	.80		.74	1.35										2.25	.50	.02	T.	.08	12.03			
Downing	Mississippi	1.20	.61			.85						.02	.94	.22		56	2.03								.85			2.43	.02	.25	.30	.67	8.12			
Edgerton	Missouri	1.12			.11	.03		.08		.24		.10	.65	.28		T.	1.64												2.05		T.	T.	.08	12.03		
Edina	Mississippi	T.	.70	1.59		.53								.07	2.00		2.12	.10								.55			.97	3.11	2.46	.03	.09	8.87		
Elisberry	do	.67	1.12														.19												2.98	1.55	.71	.10		8.69		
Farber	do		.26														1.28												1.33	.43	1.75	T.	T.	6.45		
Phayette	Missouri	.76	.12														.20	.40		.16									3.55	2.47	.09	.02		8.91		
Philon	do		1.30	T.							.19	.14		.06			1.80													1.32	1.50		.87		7.97	
Gallatin	Grand	.27				.60							.07	.38	.95		2.08												3.26	.76	.10	.09		11.46		
Gorin	Mississippi	.62	1.08			.48							.07	.18	2.25		T.	2.08												1.87	.02		.04		7.60	
Grant City	Grand	T.	.35		.49	1.67		.08						.85	.74		1.72	.32												4.52	.01	.95	.22	.14	7.38	
Hannibal	Mississippi		.33	.38										.07	1.20	T.	1.28	.11												2.98	1.55	.71	.10		8.66	
Hermann	Missouri		1.70									.16			.07	1.20	T.	1.28	.11											1.87	.02		.04		7.60	
Kahoka	Mississippi	.1.70			.96			.05	.01	.27		.05	.29	.16		1.30	T.	.05	.26	.03	.02	.03		.01	.02				4.40	.10	.22		10.08			
Kansas City	Missouri		.85		.39			.19		.01		.52	.51	.76		.06	.89												1.09	1.89	.20			9.74		
Kidder	Grand	.10			.39			.19		.01		.52	.51	.76		.06	.89												1.93	.22	1.07	.03	.09	8.21		
King City	Missouri	.35			.90	.29		.19		.01		.52	.51	.76		.06	.89												1.38	.60	1.07		.07	5.52		
Kirksville	Mississippi	.42	.40		.52			.29		.02				.68	1.10		.02	1.95												2.94		.05	T.	.06	9.75	
La Belle	do	.74	.43		.14									.20			1.46	.20												4.65	.60	.12			13.91	
Linneus	Grand	T.	.40	.03	.11		.01	T.			.04	.25	1.81			1.21	.03													1.42	2.51	.19	.18	.11	9.24	
Louisiana	Mississippi	.90	.27											.25	1.81		2.20	.14												1.01	2.15	.17	.08	.36	9.94	
Lucerne	Grand	1.26	.81		.69		.03	T.		.02	.37	1.08		.90		1.68														1.10	3.70	2.40		.15	10.17	
Macon	Chariton	.34	.13		.22									.90		1.46	.20													.65	2.41	.70	.22	.05	7.88	
Madison	Mississippi	1.70	.03											.51		.40														.80	1.35	1.20	.26	.17	7.72	
Maryville	Missouri	T.	.30		.94	1.92		.15		T.			.07	.05		.05	.88													1.50	.03	T.	T.		6.89	
Memphis	Mississippi	2.60			.83									.26	3.20		.77	.13	T.	T.										1.10	2.84	.10	.15		13.45	
Mexico	do	2.57	.02											.01	.02															1.10	2.84	.10	.15		13.45	
Milan	Grand	.14	1.25	.09	.48									.04	1.28		1.72													.05	2.11	2.09	.21	.14	9.68	
Moberly	Mississippi	2.32	.35											.70	.04		1.72													1.09	1.89	.20			9.74	
Monroe City	do	.35	.21											.04	.90		.75													1.93	.22	1.07	.03	.09	8.21	
New London	do	.44	1.24											.08	1.22		1.25	.30												1.38	.60	1.07		.07	5.52	
Oregon	Missouri	.92			1.12	.42	T.	.95		.01				.45	.57		.37	1.72												.76	1.31	.97	.57		8.55	
Palmyra	Mississippi	.82	.85											.45	.57		.37	1.72												2.55	T.	.13	.04		9.05	
Paris	do	1.12												.24	.40	.06		.75	.20											3.02	.38	.78	.35	.12	9.01	
Perry	do	1.75												.16	.40			.28												4.11	1.40	1.12	.31	.14	6.44	
Philadelphia	do	1.15	1.75											.04		.15		.88	.10												3.91	2.01	1.98	.05	.10	7.04
St. Charles	Missouri	3.05	.01								.06						.78	T.												1.20	1.44	.45	.22		6.99	
St. Joseph	do	.69	T.		1.15		T.	.33	.02	.01	.06		.37	.25		.42	2.03													.97	1.37	.29	.01		6.19	
Shelbina	Mississippi	.28	.07		.02									.93			.67	.16												.07	2.17	.09	.22	.02	8.14	
Shelbyville	do	.20	.55		.15									1.30			.67	.16													.85	1.46	.65	.11	.07	5.91
Steffensville	do	.32	.40		.10									.35	1.35		T.	.85													2.18	.68	.55	.77		7.16
Tarkio	Missouri	.63			1.36	1.75		.16		.15				.78	.05		.89	.13													2.20	.70		.20		12.12
Trenton	Grand	.40	.14		.37			.06			.02	.93	.82		.04	1.13															1.63			T.		7.53
Troy	Mississippi	2.68								.15				.93	.82		.04	1.13																		



## Daily Precipitation for September 1936—Continued from preceding page

Stations	Drainage-basins	Day of month																														Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		..
Southeastern Div.—Concluded																																	
Doniphan	Black		1.72							.82							T.	.03		.23				2.00	.30				.03				5.13
Farmington	St. Francis	.45	1.21							.04							.57	.74			.75		.46	.89	.24			.13	.42				5.90
Fisk	do		5.91	2.61							1.33						T.			T.	T.			.46	.04	1.56	T.		.17	T.			11.62
Fredericktown	do		1.79	.29							.20							1.47	.03		T.				.40	2.80				.07			7.05
Goodland	Black	1.85	1.30							.10								.55	1.13					.48	1.71	.31		.21	.81		.04		8.49
Greenville	St. Francis	1.20	3.55														T.	.53		.11				.22	1.47		.04					7.12	
Jackson	Mississippi	.28	1.95						T.									.61		.10				.46				.05				3.45	
Koshkong	Black		.46		.08					.10	.07							.29	1.65		.23	.06		3.70	.05		1.19					7.88	
Leeper	do		5.71	.06														1.88	.05		.08	.02		.21	1.51			.03				9.55	
Marble Hill	Mississippi		2.96	.05						.05								.42	1.20					.70				.20				5.58	
Meramec Park	Meramec		.98	.27							.55							.13		.07				.42	.10		.45	1.45	.10		T.		4.52
Morehouse	Mississippi		3.58	1.16						T.								.13		T.				1.11				.07		T.		6.05	
New Madrid	do		5.75	4.22						1.03							T.			.01				.39	1.16		.01	.54	.53	.05		13.69	
Owensville	Gasconade		1.37							1.12										.18	.16				.74		1.33	1.51	.14	.04		6.59	
Panna	St. Francis		5.05	1.80						.32													T.	1.30					.37			8.84	
Poplar Bluff	Black		6.17	.90						1.52								.04		T.	.17			.02	2.00							10.82	
Rolla	Meramec		4.30							.30								.12		.03	.40				10.18			1.25	1.30	.10		9.70	
St. Louis***	Mississippi	2.52	.11	T.						.06		.15						.17		T.	.05			.50	.01		T.	.40	1.96	.01	T.	5.94	
St. Louis University*	do		2.45	.08	.02					.05		T.						.23		T.	.05			.50			.02	.61	1.77			5.78	
Salem	Meramec		1.50	1.66						.36								.98	.24	.03	.55			1.37	.07			.45	.94	T.	.03	8.18	
Sikeston	Mississippi		2.70	1.78						.01								.10			.02			.07	1.10			.01		.13	.01	5.93	
Union	Meramec		1.41							.44								T.	T.	.01	.16			.03	.38		.85	1.30	.36	.03		4.97	
Valley Park	do		2.90	.03						.10								.36		T.	.20			.09	.23		.40	1.60	.35	.04		6.30	
Williamsville	Black		4.27	.22						.03								.91		.09				.30	1.30			.15	.01			7.28	
Willow Sprgs. (near)	White		.52	.04		.05		.79		.10								1.96				.12		.60	3.08		1.33	.90	.04	.01		9.54	
Zalma	Mississippi																	.40	.20					1.00				.20					
Cairo, Ill.***	do		1.54	.49						.04								.12		.01			T.	.86			T.	.05	.45	T.	.01	3.57	

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. || Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. T. Trace, or less than 0.01 inch.

\*\*\* Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. \*\* Precipitation in the next following measurement; separate dates of fall not recorded. \* Precipitation is for 24-hour period, midnight to midnight. † Estimated. ‡ Partially estimated. |||| Incomplete.

## Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for September 1936

(See precipitation data in table on preceding page)

Station	Data	Day of month																														Monthly	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		..
Lakeside ..... (Osage Dam)	{ Evaporation ..... Mean temperature .. Wind movement ..	.232 72 45	.... 76 89	.246 72 72	.128 78 59	.186 83 63	.290 84 72	.316 84 66	.234 82 53	.... 76 38	.... 79 49	.... 84 31	.... 84 70	.302 83 58	.340 86 70	.346 86 81	.213 70 63	.062 62 82	.053 67 41	.102 66 58	.031 72 35	.103 76 38	.153 78 31	.176 73 60	.317 64 77	.198 58 54	.167 68 84	.... 60 72	.... 56 78	.... 56 60	.... 58 56	.... 58 56	5.545 73.0 1,808

Observations taken at 7.30 a. m. Wind movement corrected to true velocities. For description see April 1932 report. \*\*\*\* —.006.

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River stages began an upward trend following record low stages of the previous month, due to the heavy rains the first two days of September, but remained below normal throughout the month, except at St. Louis where the stage reached above normal on the last two days for the first time since early April.

—M. R. W.

## TEMPERATURE

The monthly mean temperature for the State, 71 stations reporting, was 73.6°, or 4.4° above normal. The highest monthly mean was 78.0° at Caruthersville, and the lowest monthly mean was 69.3° at Tarkio. The highest temperature recorded was 109° at Nevada on the 6th, and the lowest was 37° at Kirksville on the 25th. The greatest daily range was 43° at Lamar on the 1st and at Unionville on the 6th.

## PRECIPITATION

The average precipitation for the State, 124 stations reporting, was 8.62 inches, or 4.44 inches above normal. The greatest local monthly amount was 14.31 inches at Dean, and the least local monthly amount was 3.45 inches at Jackson. The greatest amount in any twenty-four hours was 9.97 inches at New Madrid on the 2-3d. The average number of days with 0.01 inch

or more of precipitation was 11. A trace of snow was recorded at Clifton Hill on the 28th.

## MISCELLANEOUS PHENOMENA

Fog.—Dense, 10th, 20th, 30th.

Frosts.—None.

Hail.—Light, 23d at Lockwood; moderate, 2d, twenty miles north of Doniphan; damaged late hay crop.

Halos.—Solar, 1st, 5th, 17th, 25th; lunar, 25th.

Thunderstorms.—Local, 3d, 5th, 6th, 7th, 8th, 11th, 13th, 17th, 19th, 20th, 22d, 25th, 26th, 27th, 28th; more or less general, 1st, 2d, 4th, 9th, 12th, 15th, 16th, 23d.

Tornado.—A small twister, with funnel-shaped cloud, struck in the vicinity of Lamar and Irwin, Barton County, about 3 p. m. of the 23d and caused much damage to houses, barns, small outbuildings, trees, telephone poles and wires, and scattered fields of shocked fodder. Amount of damage not available.

Windstorms.—On the 23d, at Springfield, a violent straight-line windstorm demolished small houses, moved others on their foundations, wrecked outbuildings, and broke trees and light and power lines. Damage estimated at several thousand dollars.



Daily Temperatures for September 1936

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	..	Mean
Northern Division																																
Brunswick	Maximum	86	79	77	88	100	103	96	95	93	97	100	98	94	95	94	86	72	75	78	88	91	92	85	74	74	69	69	65	68	65	84.9
Brunswick	Minimum	68	67	64	65	75	77	77	65	70	65	73	73	69	73	75	56	72	75	78	88	91	92	85	74	74	69	69	65	68	65	84.9
Chillicothe §§	Maximum	74	80	77	89	101	105	97	100	94	101	104	86	95	96	92	66	71	77	81	88	98	92	89	77	77	61	56	56	67	68	83.8
Chillicothe §§	Minimum	66	65	61	63	69	74	72	60	68	61	71	68	68	72	73	52	51	54	59	62	64	56	61	46	49	55	50	47	49	51	60.6
Columbia	Maximum	80	78	76	88	95	98	95	94	84	94	100	98	98	97	96	76	68	74	73	85	87	90	73	68	70	73	67	56	57	62	81.7
Columbia	Minimum	67	67	66	65	75	75	75	65	68	66	75	73	72	77	69	58	56	60	63	63	67	67	65	52	51	57	54	53	51	50	61.1
Fayette	Maximum	85	79	76	90	98	104	97	96	90	90	104	100	99	99	99	85	76	76	91	90	93	94	72	73	75	71	57	60	66	...	85.8
Fayette	Minimum	57	65	64	64	74	74	71	61	64	60	74	71	69	70	72	56	57	58	62	67	62	63	66	61	44	55	53	52	51	54	62.0
Grant City	Maximum	80	77	75	75	94	97	91	94	93	95	97	94	91	92	85	63	73	76	78	75	89	84	81	72	73	67	59	58	67	70	80.5
Grant City	Minimum	71	63	60	57	60	65	69	60	68	65	76	69	69	71	62	55	50	51	55	62	63	66	66	44	51	56	47	48	52	53	60.5
Hannibal	Maximum	85	76	79	86	86	100	96	92	90	93	101	95	93	96	96	87	68	75	79	88	90	92	82	69	72	67	70	55	67	62	82.9
Hannibal	Minimum	62	66	65	62	68	74	73	66	68	65	74	69	68	76	76	54	55	56	62	67	67	62	66	51	48	55	53	50	51	54	62.8
Kansas City	Maximum	80	81	76	90	103	104	92	93	90	101	101	87	96	95	92	65	70	74	84	90	90	90	74	74	73	66	57	55	57	68	82.4
Kansas City	Minimum	69	68	64	68	79	80	72	65	66	71	79	71	71	78	65	56	55	60	64	65	69	71	63	53	56	57	51	49	53	54	64.7
Kidder	Maximum	88	80	76	87	96	101	95	95	91	96	99	94	91	92	87	63	69	73	78	86	89	89	83	73	73	66	57	55	57	68	82.4
Kidder	Minimum	65	63	59	63	70	75	70	63	66	61	71	67	68	69	72	54	49	53	55	60	62	64	65	49	49	55	47	46	60	65	60.7
Kirksville	Maximum	82	75	81	86	92	101	93	94	88	95	93	101	92	93	91	68	77	78	87	89	91	88	72	71	63	58	57	57	67	66	82.5
Kirksville	Minimum	68	64	64	60	68	75	75	64	79	63	65	68	69	74	75	53	50	50	53	63	62	65	64	49	37	48	52	47	50	54	60.9
Louisiana	Maximum	72	70	72	95	90	100	100	94	90	94	103	100	98	98	94	76	66	80	86	90	90	93	80	70	70	70	62	60	62	65	83.0
Louisiana	Minimum	67	66	66	60	68	70	72	60	60	59	70	70	68	72	74	66	56	55	50	60	64	60	64	54	40	55	60	50	50	55	61.4
Macon §§	Maximum	79	79	79	88	97	103	97	95	89	95	104	97	95	96	97	64	69	75	80	87	90	93	73	71	72	70	57	56	68	63	82.6
Macon §§	Minimum	65	65	65	61	62	69	76	64	66	61	66	71	69	73	76	59	50	53	55	59	64	65	67	48	48	53	53	48	49	51	61.0
Maryville	Maximum	87	80	76	80	95	95	87	92	88	95	100	79	88	90	85	65	69	73	79	86	91	90	82	72	73	68	56	57	61	68	80.2
Maryville	Minimum	71	62	60	64	68	74	68	62	65	66	74	69	69	71	62	55	51	52	58	60	63	64	67	47	50	56	47	48	50	48	60.7
Mexico §§	Maximum	78	80	77	87	95	99	96	93	85	97	102	100	99	98	98	65	69	74	76	89	92	93	71	69	72	73	60	55	61	64	82.2
Mexico §§	Minimum	63	64	64	62	68	73	72	63	65	64	67	74	70	73	75	60	54	55	56	60	64	65	67	50	48	50	55	50	49	51	61.9
Moberly	Maximum	80	78	75	86	95	99	95	92	85	93	100	96	95	94	94	76	70	74	75	87	89	90	72	69	70	72	70	56	66	...	81.8
Moberly	Minimum	67	64	65	63	72	73	73	60	62	60	74	69	70	72	74	54	54	55	55	61	64	65	66	50	47	54	45	50	51	50	61.3
Oregon	Maximum	89	82	78	87	98	99	87	92	89	98	98	84	93	92	84	66	72	76	80	88	90	89	79	74	75	67	60	58	65	70	82.0
Oregon	Minimum	67	60	60	65	69	74	68	64	64	67	75	69	69	74	63	54	48	52	60	61	64	65	67	48	52	56	48	46	51	49	61.0
St. Joseph	Maximum	86	80	77	87	100	102	88	95	90	99	100	81	94	92	84	67	71	75	81	86	90	90	78	73	75	64	59	55	67	69	81.8
St. Joseph	Minimum	67	64	62	67	76	77	70	64	66	70	73	70	70	76	61	54	52	59	61	64	65	70	68	73	54	54	48	50	54	53	62.8
Trenton	Maximum	83	78	79	90	99	104	96	98	93	99	103	90	93	95	93	83	71	76	81	90	92	92	84	78	76	70	65	59	69	72	85.0
Trenton	Minimum	66	66	61	64	72	74	73	63	69	63	72	69	69	71	75	56	48	52	56	64	63	67	67	48	50	54	50	49	53	55	62.0
Unionville §§	Maximum	78	71	82	88	86	101	90	93	80	96	101	83	91	92	88	66	70	75	79	87	90	90	81	74	71	58	58	60	69	67	80.5
Unionville §§	Minimum	63	61	61	62	65	58	61	63	67	67	68	69	70	74	55	50	50	52	58	62	64	66	45	48	52	50	47	48	52	...	59.0
Warrenton	Maximum	89	84	77	87	90	95	99	97	86	95	101	100	100	98	96	90	71	75	75	90	92	92	87	74	72	76	75	57	59	64	84.8
Warrenton	Minimum	67	65	65	63	69	71	71	69	67	65	72	74	70	74	73	59	54	58	60	66	66	66	68	52	48	57	56	51	50	55	63.2
Southwestern Division																																
Appleton City	Maximum	91	88	83	95	103	106	102	98	88	102	104	101	102	100	98	83	67	75	81	86	91	91	83	71	73	78	68	58	63	69	86.6
Appleton City	Minimum	66	66	63	67	73	73	73	67	66	64	79	72	69	70	72	56	56	61	63	62	63	67	51	45	46	51	51	53	50	...	62.7
Clinton	Maximum	85	83	83	95	102	107	101	100	89	102	103	101	101	100	99	85	64	75	80	90	90	91	82	71	72	73	70	58	58	68	85.9
Clinton	Minimum	55	68	64	68	74	73	73	73	68	65	76	68	68	71	71	56	56	63	53	66	74	66	65	53	58	57	53	52	52	50	63.6
Eldon §§	Maximum	72	76	84	83	93	99																									





## CLIMATOLOGICAL DATA

19

## MISSOURI SECTION

ROSCOE NUNN  
ST. LOUIS, MO.

VOL. XL

OCTOBER 1936

No. 10

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## GENERAL SUMMARY

Normal weather prevailed almost generally in Missouri during October. For the State as a whole, the temperature averaged slightly below normal and the rainfall somewhat more than normal. Temperature deficiencies were greater in the Southwestern Division than elsewhere and rainfall was comparatively light in the Northern Division. Heavy rains occurred in parts of the southern half of the State between the 6th and 9th and on the 25-26th.

The month was quite similar in most respects to October a year ago. It was the first month since April to average cooler than normal. No very marked extremes of temperature occurred. It was unusually mild about the 13-16th and the 19-20th. The coolest period was the 22d-27th, when the first killing frosts of the season occurred. Killing frost occurred as early as the 22d in the extreme northwestern counties, and was pretty general the mornings of the 24th and 27th, excepting some areas in the southern half of the State.

There was less bright sunshine and somewhat more fog than usual for October. No severe storms occurred.

Soil moisture was ample at all times and late-growing crops made fair progress. The gathering of crops and sowing of winter grains advanced normally in most sections, but seeding of wheat was interrupted considerably in places by rains during the first two weeks. At the end of the month wheat, barley, rye, and pastures were generally in good condition, and corn husking was well advanced.

Although the ground was well supplied with moisture in the upper layers, rivers, small streams, and springs were unusually low, indicating the ground has not yet regained normal moisture much below the surface.

## TEMPERATURE

The monthly mean temperature for the State, 71 stations reporting, was 56.7°, or 0.7° below normal. The highest monthly mean was 60.8° at Caruthersville, and the lowest monthly mean was 52.4° at Kidder and Unionville. The highest temperature recorded was 89° at Nevada on the 5th, and the lowest was 20° at Downing and Unionville on the 27th. The greatest daily range was 44° at Goodland on the 18th.

## PRECIPITATION

The average precipitation for the State, 126 stations reporting, was 3.55 inches, or 0.63 inch more than normal. The greatest local monthly amount was 8.87 inches at Dean, and the least local monthly amount was 1.01 inches at Memphis. The greatest amount in any twenty-four hours was 3.66 inches at Dean on the 6th. The average number of days with 0.01 inch or more of precipitation was 8. Snow flurries were recorded at a few stations, the greatest fall being 0.5 inch at Maryville on the 26th.

## MISCELLANEOUS PHENOMENA

Fog.—Dense, 1st, 2d, 3d, 4th, 6th, 7th, 8th, 9th, 16th, 24th, 30th, 31st.

Frosts.—Light, 2d, 11th, 18th, 23d, 24th, 27th, 29th, 30th; heavy, 23d, 24th, 29th; killing, 22d, 23d, 24th, 27th, 28th.

Hail.—Light, 5th at Lockwood and Neosho, 6th at Neosho, 7th at Dean, 21st in St. Louis County.

Halos.—Solar, 4th, 6th, 17th, 18th, 19th, 20th, 23d; lunar, 22d, 24th, 28th.

Sleet.—26th, 28th.

Smoke.—Dense, 24th, 30th.

Thunderstorms.—Local, 3d, 4th, 7th, 8th, 9th, 16th, 17th, 20th, 25th, 26th, 31st; more or less general, 5th, 6th, 21st.

Windstorm.—On 31st at Appleton City trees were damaged by wind.

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind				Relative humidity			Percentage of sunshine
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	7 a. m.	12 noon	7 p. m.	
Columbia.....	30.06	30.51	26	29.68	9	7.9	26	sw.	31	84	60	69	56
Kansas City.....	30.06	30.62	26	29.59	20	10.2	35	n.	25	78	54	62	58
St. Joseph.....	30.05	30.61	26	29.59	20	8.2	27	n.	25	77	51	64	61
St. Louis.....	30.06	30.50	26	29.61	10	11.9	40	sw.	31	80	57	61	50
Springfield.....	30.08	30.49	26	29.76	9	9.6	26	w.	6	83	62	68	57
Cairo, Ill.....	30.08	30.44	26	29.72	10	7.8	24	n.	26	86	60	69	60
Keokuk, Iowa..	30.05	30.57	26	29.62	9	7.8	23	s.	31	78	55	64	51

## COMPARATIVE DATA FOR OCTOBER

Year	Temperature			Precipitation					Number of days				
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. in. or more	Clear	Partly cloudy	Cloudy	
1888.....	53.6	89	24	2.72	2.02	3.32	2.82	....	6	..	..	..	
1889.....	53.8	91	22	2.32	2.54	2.05	2.38	....	5	..	..	..	
1890.....	54.8	91	20	2.35	3.01	2.70	1.33	....	7	..	..	..	
1891.....	55.7	92	20	1.05	1.31	1.09	0.76	....	5	..	..	..	
1892.....	57.5	95	16	2.40	2.04	2.78	2.39	.... 0	5	16	7	8	
1893.....	56.7	95	16	1.12	0.48	0.91	1.97	.... T.	3	20	8	3	
1894.....	57.6	94	18	1.82	2.09	1.26	2.12	.... T.	6	17	8	6	
1895.....	51.2	89	14	0.42	0.26	0.34	0.66	.... T.	2	21	6	4	
1896.....	54.1	90	19	2.48	2.70	2.43	2.32	.... 0	5	19	6	6	
1897.....	62.5	99	23	0.74	0.55	0.81	0.87	.... 0	3	22	6	3	
1898.....	53.5	95	19	4.35	4.26	4.18	4.61	1.4 ....	8	11	7	13	
1899.....	62.4	100	24	3.16	1.98	3.58	3.93	.... 0	5	20	6	5	
1900.....	62.4	92	25	3.96	5.23	3.78	2.86	.... 0	7	17	7	7	
1901.....	60.1	96	24	1.69	1.55	1.63	1.89	.... 0	6	18	8	5	
1902.....	59.5	88	23	2.41	2.90	2.30	2.02	.... 0	5	21	5	5	
1903.....	57.3	90	19	3.06	2.19	3.76	3.22	.... 0	5	19	6	6	
1904.....	57.6	90	19	0.88	0.93	0.81	0.90	.... 0	3	20	7	4	
1905.....	55.1	90	20	4.85	3.67	5.78	5.09	0.3 ....	10	15	7	9	
1906.....	56.3	94	17	1.06	0.66	0.89	1.62	.... 0	5	17	6	8	
1907.....	56.7	94	18	2.93	2.02	3.62	3.14	.... 0	7	17	6	8	
1908.....	56.3	92	21	2.39	3.60	3.11	0.45	0.8 ....	5	18	6	7	
1909.....	57.2	96	20	2.72	3.45	2.99	1.71	T. ....	6	19	5	7	
1910.....	59.4	94	15	2.97	0.97	1.76	6.18	.... 0	5	22	4	5	
1911.....	56.9	96	25	3.16	3.81	3.31	2.36	0.2 ....	8	11	7	13	
1912.....	59.1	97	21	3.78	3.87	4.29	3.17	0.7 ....	6	20	5	6	
1913.....	54.7	93	11	4.65	3.68	3.92	6.36	3.3 ....	9	15	6	10	
1914.....	59.2	88	19	4.59	4.32	4.28	5.17	.... 0	7	14	6	11	
1915.....	59.3	95	22	1.22	0.77	1.61	1.29	.... 0	3	23	5	3	
1916.....	58.0	95	20	2.12	2.53	2.03	1.79	0.3 ....	6	18	5	8	
1917.....	49.8	93	12	1.15	1.25	0.77	1.43	0.2 ....	6	16	8	7	
1918.....	60.6	95	28	3.45	3.02	3.51	3.82	.... 0	7	14	6	11	
1919.....	58.4	98	17	7.07	3.49	8.48	9.23	.... T	11	10	7	14	
1920.....	61.3	93	18	3.14	1.94	3.76	3.73	T ....	7	17	6	8	
1921.....	57.9	92	24	2.15	2.78	2.20	1.47	.... 0	5	21	5	5	
1922.....	59.9	97	18	2.04	2.00	1.84	2.28	.... 0	5	20	5	6	
1923.....	53.0	89	17	3.55	2.40	4.40	3.84	0.1 ....	9	15	5	11	
1924.....	61.8	92	21	1.22	1.54	1.59	0.52	.... 0	4	22	5	4	
1925.....	48.6	92	—	3	4.98	3.70	4.12	2.4 ....	10	8	8	15	
1926.....	57.3	93	21	4.73	4.43	4.98	4.77	.... 0	9	14	6	11	
1927.....	60.9	93	26	4.59	5.49	5.33	2.96	.... 0	5	22	5	4	
1928.....	60.9	94	22	3.82	3.85	2.91	4.71	.... 0	8	15	8	8	
1929.....	57.2	91	23	5.36	6.30	5.97	3.80	T. ....	10	15	6	10	
1930.....	55.3	92	11	3.09	2.43	3.63	3.17	T. ....	6	16	6	9	
1931.....	61.7	95	27	3.37	3.89	3.99	2.23	.... 0	8	15	7	9	
1932.....	55.7	90	22	3.54	2.79	3.19	4.65	.... 0	5	18	8	8	
1933.....	56.4	86	23	2.90	1.68	3.78	3.25	.... 0	7	17	8	6	
1934.....	61.1	90	24	2.50	2.22	3.02	2.25	T. ....	4	22	5	4	
1935.....	57.1	90	21	3.47	2.04	4.42	3.94	T. ....	10	12	7	12	
1936.....	56.7	89	20	3.55	2.45	3.76	4.43	T. ....	8	16	6	9	
.....	..	....	....	....	....	....	....	....	..	..	..	..	
Period.....	57.4	100	— 3	2.92	2.63	3.08	3.04	0.2	6	17	6	8	



## Climatological Data for October 1936

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches			Number of days				Prevailing direction of wind	Observers		
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelted	With precip., .01 inch or more	Clear			Partly cloudy	Cloudy
Northern Division																				
Bethany	Harrison	916	41	55.5	+ 0.7	84	19	24	23	38	2.89	-0.03	0.90	0	7	17	9	5	se.	A. S. Cumming
Brunswick	Chariton	652	55	57.6	+ 2.3	82	20	29	23†	35	2.48	-0.52	1.10	0	11	16	6	9	sw.	O. K. Benecke
Chillicothe	Livingston	779	27	55.0	- 1.8	83	19	23	23	39	4.50	+1.36	3.50	0	7	17	3	11	sw.	Wm. J. Olenhouse
Clifton Hill	Randolph	731	37	57.0	+ 0.3	82	20	26	23	33	2.52	0.00	1.09	0	8	19	3	9	s.	Dr. A. J. Bradsher
Columbia	Boone	740	46	56.4	- 0.2	82	19	30	27	31	2.09	-0.52	0.99	0	9	11	9	11	s.	U. S. Weather Bureau
Conception	Nodaway	980	47	55.4	0.0	82	19	23	27	32	2.39	-0.49	0.80	0	8	11	14	6	s.	Fr. Adelm Hess
Downing	Schuyler	876	15	55.0	- 0.9	82	20	20	27	39	2.59	-0.47	0.90	T.	5	20	2	9	s.	Everett Rowe
Edgerton	Platte	856	16	57.0*	+ 0.7	83	18†	21	23	38	2.89	+0.27	1.05	0	8	20	1	10	n.	Fred L. Stiff
Elsberry	Lincoln	449	5	56.0	.....	86	20	26	24	40	3.28	.....	1.14	0	8	15	7	9	sw.	Ray E. Mills
Fayette	Howard	680	56	56.5	+ 0.1	83	20	26	24	35	2.09	-0.80	0.77	0	7	12	10	9	s.	Harry P. Mason
Fulton	Callaway	818	48	56.7	- 0.7	83	5†	26	24	38	3.09	-0.33	1.45	0	10	15	7	9	s.	Clyde C. Herring
Gorin	Scotland	700	49	.....	.....	.....	.....	.....	.....	.....	1.61	-1.37	0.73	0	7	18	6	7	nw.	W. L. Harker
Graut City	Worth	1,134	32	52.5	- 2.6	80	20	22	23†	34	3.84	+0.80	1.79	0	7	8	15	8	ne.	Howard Rybolt
Hannibal	Marion	759	44	57.0	+ 1.0	83	20	28	23	34	2.00	-0.39	0.69	0	9	12	4	15	n.	Hannibal Water Dept.
Kansas City	Jackson	741	47	57.2	- 0.5	84	18	29	23	34	2.01	-0.91	0.73	0	8	14	6	11	sw	U. S. Weather Bureau
Kidder	Caldwell	1,020	44	52.4	- 3.4	80	19†	24	23†	35	3.12	+0.05	2.00	0	6	19	2	10	s.	Roscoe L. Terry
King City	Gentry	1,095	10	.....	.....	.....	.....	.....	.....	.....	2.50	-0.40	1.08	T.	7	10	15	6	se.	John M. Martin
Kirksville	Adair	969	47	55.4*	+ 0.7	81	20	23	27	38	1.41	-1.75	0.47	0	6	14*	6*	10*	sw.	Prof. J. S. Stokes
Linneus	Linn	816	4	.....	.....	.....	.....	.....	.....	.....	3.21	.....	2.31	0	7	16	7	8	sw.	H. D. Taggart
Louisiana	Pike	469	42	55.8	- 0.4	84	20	26	24	40	1.55	-1.73	0.55	0	7	15	8	8	s.	Stark Bro's Nurseries
Macon	Macon	875	37	54.8	- 1.5	85	20	26	23	34	1.83	-1.06	0.70	0	8	15	9	7	w.	W. C. Brown
Maryville	Nodaway	1,169	46	53.3	- 0.2	81	19†	21	27	36	2.45	-0.52	1.00	0.5	8	13	5	13	nw.	R. B. Montgomery
Mexico	Audrain	800	47	54.1	- 2.2	83	19	27	24	37	3.37	+0.30	1.80	0	9	19	1	11	sw.	Mrs. Abbie Snoddy
Moberly	Randolph	875	0	55.1	.....	82	20	27	23†	35	2.25	.....	0.61	0	9	18	4	9	sw.	J. W. Adams
Monroe City	Monroe	748	15	.....	.....	.....	.....	.....	.....	.....	2.63	+0.03	0.98	0	7	15	8	8	ne.	J. S. Conway
Oregon	Holt	1,048	80	55.3	+ 0.2	83	19	23	27	36	2.03	-0.72	1.09	0	7	15	10	6	sw.	Miss Mina Wright
St. Charles	St. Charles	520	48	58.0	- 0.2	84	5†	28	27	37	2.80	-0.38	1.08	0	9	20	5	6	se.	Martin L. Comann
St. Joseph	Buchanan	957	26	55.6	- 1.2	84	19	26	23	38	2.48	-0.21	0.81	0	9	15	7	9	s.	U. S. Weather Bureau
Shelbina	Shelby	779	43	.....	.....	.....	.....	.....	.....	.....	2.29	-0.32	0.86	0	8	.....	.....	.....	.....	J. C. Jewett
Steffenville	Lewis	650	38	56.2	- 1.2	83	20	25	23	36	2.93	+0.20	1.15	0	9	17	5	9	s.	Frank Hall
Tarkio	Atchison	916	33	54.2	- 0.6	83	18†	22	23†	39	1.31	-1.50	0.92	0	6	15	4	12	sw.	Albert Volker
Trenton	Grundy	822	40	55.4	- 0.5	84	19	25	23	41	2.01	-1.12	0.76	0	6	15	10	6	s.	W. H. Estes
Unionville	Putnam	1,062	43	52.4	- 2.8	80	20	20	27	38	1.69	-1.44	0.75	0	5	14	3	14	s.	John H. Schick
Warrenton	Warren	816	54	57.7	+ 1.7	82	19	28	27	32	3.01	-0.43	1.27	0	10	12	9	10	sw.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia	574	65	56.0	+ 0.6	83	20	29	27	29	1.80	-0.46	0.56	0	7	8	11	12	sw.	U. S. Weather Bureau
<b>Division means and extremes</b>				<b>55.6</b>	<b>- 0.4</b>	<b>86</b>	<b>20</b>	<b>20</b>	<b>27</b>	<b>41</b>	<b>2.45</b>	<b>-0.18</b>	<b>3.50</b>	<b>T.</b>	<b>8</b>	<b>15</b>	<b>7</b>	<b>9</b>	<b>s.</b>	
Southwestern Division																				
Appleton City	St. Clair	853	41	56.7	- 2.2	84	5	29	24	38	5.24	+2.28	1.30	0	7	21	2	8	sw.	Rolla Brown
Buffalo	Dallas	1,200	6	.....	.....	.....	.....	.....	.....	.....	2.67	.....	1.03	0	7	19	2	10	.....	C. M. McCallister
Captlinger Mills	Cedar	750	10	.....	.....	.....	.....	.....	.....	.....	4.05	+0.17	2.13	0	5	19	3	9	se.	Ozark Utilities Co.
Clinton	Henry	765	43	57.4	- 1.5	82	5†	29	24	36	3.29	-0.16	0.93	0	10	15	8	8	sw.	A. E. Derwent, M. D.
Concordia	Lafayette	784	21	.....	.....	.....	.....	.....	.....	.....	3.39	-0.41	1.28	0	7	17	6	8	sw.	Miss Ora Stratman
Dean†	McDonald	1,000	32	57.7	- 1.0	83	5†	32	24	38	8.87	+4.98	3.66	0	7	19	5	7	sw.	E. S. Taylor
Eldon	Miller	934	41	54.3	- 3.1	84	20	30	24†	35	2.35	-1.35	1.07	0	10	12	9	10	n.	E. H. Shepherd
Garber	Taney	950	1	57.3	.....	86	19	30	24	43	4.90	.....	2.09	0	9	11	5	15	e.	William H. Durham
Hailey†	Barry	1,350	11	.....	.....	.....	.....	.....	.....	.....	3.41	-0.89	1.25	0	6	16	7	8	w.	A. W. Madison
Harrisonville	Cass	904	58	54.0	- 2.1	85	5	29	23†	41	1.99	-0.98	0.77	0	7	14	10	7	sw.	John H. Patterson
Jefferson City	Cole	557	46	55.6	- 1.2	81	19†	28	24	35	2.18	-1.19	1.11	0	8	16	9	6	s.	Mrs. Frank Kliegel
Lamar	Barton	980	48	56.5	- 2.4	86	19	31	25	37	3.85	+0.24	1.15	0	9	19	4	8	sw.	Jesse A. Mann
LaMonte	Pettis	867	35	56.2	- 1.8	82	18	29	24	39	2.77	-0.40	1.10	0	8	16	5	10	sw.	J. E. Wheeler
Lebanon	Laclede	1,265	48	56.2	- 1.5	83	4	30	24†	36	3.54	-0.23	0.82	0	7	16	5	10	sw.	Mrs. Lou Mulcare
Lexington	Lafayette	688	51	55.8	- 1.7	82	5†	28	23	35	4.30	+1.27	2.40	0	7	19	6	6	s.	Miss Carrie Loomis
Lockwood	Dade	1,078	30	57.9	- 0.8	81	5†	34	24†	31	6.33	+2.43	3.05	0	8	19	4	8	sw.	Hubert A. Nieman
Marshall	Saline	779	49	57.6	+ 1.0	83	20	29	23	33	2.28	-0.85	0.77	0	8	20	4	7	sw.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	35	56.4	- 1.2	80	19	27	27	37	3.60	+0.14	1.32	0	9	16	6	9	se.	Mo. Fruit Exp. Sta.
Neosho	Newton	1,011	49	58.0	- 1.2	83	19	31	24	37	4.73	+1.04	1.99	0	10	17	4	10	se.	U. S. Fisheries Sta.
Nevada	Vernon	862	43	58.3	+ 0.7	89	5	32	24	38	3.35	+0.28	1.65	0	7	17	5	9	sw.	T. J. Kaupp
Seligman	Barry	1,542	35	57.2	- 1.8	82	19	31	27	33	4.05	+0.59	1.74	0	6	17	6	8	w.	Floyd E. Fawver
Seymour (near)	Webster	1,642	30	55.5	- 1.9	79	19	28	24	34	3.99	+0.51	1.50	0	8	18	2	11	s.	A. L. Hailey
Springfield	Greene	1,301	48	56.9	- 1.3	80	19	33	27	29	5.27	+2.22	1.66	T.	10	14	6	11	s.	U. S. Weather Bureau
Versailles	Morgan	1,037	4	58.4	.....	84	19	30	24†	36	2.24	-1.16	0.72	0	9	15	5	11	sw.	I. M. Wilson
Warrensburg	Johnson	878	49	58.0	- 0.0	82	5†	29	23	35	4.21	+1.19	1.67	0	9	20	1	10	sw.	E. A. Markey
Warsaw	Benton	687	35	58.0	- 1.0	85	19	29	24	35	3.44	-0.86	1.83	0	9	17	4	10	s.	Everett Martin
<b>Division means and extremes</b>				<b>56.8</b>	<b>- 1.3</b>	<b>89</b>	<b>5</b>	<b>27</b>	<b>27</b>	<b>43</b>	<b>3.76</b>	<b>+0.68</b>	<b>3.66</b>	<b>T.</b>	<b>8</b>	<b>17</b>	<b>5</b>	<b>9</b>	<b>sw.</b>	
Southeastern Division																				
Arcadia	Iron	926	55	55.6	- 0.4	81	19	28	24†	42	7.69	+4.24	2.30	0	9	17	2			



## Daily Precipitation for October 1936

Stations	Drainage-basins	Day of month																															Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Northern Division																																		
Amity	Grand			T.	.50				.04	.67								.04				.14					.31					T.	1.70	
Bethany	do				.57		.22		T.	.76	.09											.90				.26	.09						2.89	
Bowling Green	Mississippi						.15			.61								.94				.12	.09				.67						2.72	
Brunswick	Grand	.02			.27					.06	1.10	.02						.18				.03	.02				.05	.70					.14	2.48
Canton	Mississippi	.04			.08			T.		.17	.05							T.				.05	.01				.65						.11	1.16
Chillicothe	Grand				.50			.04		.05	1.50							.03				.04					.34					T.	4.50	
Clifton Hill	Chariton				.42	.01				.12	1.09							.12				.04					.56	.16						2.52
Columbia	Missouri				.29	.19	T.	.01	.36	.01							.05					.14				.99	T.					.05	2.09	
Conception	do				.80	.06		T.	.39								.05					T.			.62	.14	.17					.16	2.39	
Downing	Mississippi				.12			T.	.90	.87								T.					.50			T.	.20						2.59	
Edgerton	Missouri				1.05	T.		.46	.88	.02							T.	.03								.41	.03			.01			2.89	
Edina	Mississippi	T.			.14			T.	.25	.12															.26		T.	.50				.10	1.37	
Elsberry	do				.14	T.	.03	T.	1.14									.47							.30	.09	.67	.46				.12	3.28	
Farber	do								.76									.30							.10	.12	.65					.09	2.02	
Fayette	Missouri				.32	T.		.01	.34	.35								.18				T.				.77	.12						2.09	
Fulton	do				.11	.06		.02	1.45	T.								.07					.02	.04		.15	.15				.02		3.09	
Gallatin	Grand				.65				.08	2.25															.24		.40						3.62	
Gorin	Mississippi				.16	.15		T.	.73	.06								T.							.16		.22	.13			T.		1.61	
Grant City	Grand				T.	.37	1.79		T.	.11	T.						T.	T.				T.	1.14			.19	.05					.19	3.84	
Hannibal	Mississippi				.29	.08			.38	.16								.03							.13	.24	.53	.16				.24	2.00	
Hermann	Missouri					.10	.01			1.38	.02							.18					.03	.72		.02	1.18			.01		.08	3.73	
Kahoka	Mississippi				.10	.05			.50	1.40								.03					.10				.50					.20	2.88	
Kansas City	Missouri				T.	.26	.05	T.	.73	.49							.06					.02	.03			.37					T.		2.01	
Kidder	Grand				.52				.09	2.00								.08					.11				.32						3.12	
King City	Missouri				1.08	.15		.08	.47								.02						.37			.33							2.50	
Kirksville	Mississippi	.30			.30	.09			.47																	.08	.17						1.41	
LaBelle	do				.11				.98	.38																	.02	.58					2.15	
Linn	Grand	.01			.38		.14		.01	2.81								.04							T.		.32						3.21	
Louisiana	Mississippi					.15			.55																		.30				.15		1.55	
Lucerne	Grand				.32			T.	.09	.27								.03							.54		.41				.05		1.71	
Macou	Chariton	.01			.22				T.	.70								.05					.10	.02			.70					.03	1.83	
Madison	Mississippi				.38				.50	.40								.33							.30		.58					.04	2.53	
Maryville	Missouri				T.	.47	1.00		.02	.16															.04		.30	.07			.39		2.45	
Memphis	Mississippi	T.			.10				.21	.24								T.					.18				.28					T.	1.01	
Mexico	do					.18			1.80									.28					.05	.10		.06	.78	.02			.10		3.37	
Milan	Grand	.42			.51				.08	1.17								.06					.06				.23						2.47	
Moberly	Mississippi				.33	T.	T.	.02	.45	.59							.08	.06					.10			.61					.01		2.25	
Mourne City	do				.13				.98	.34							.09						.30				.64					.15	2.63	
New London	do				.12			.39																	.54		.68					.16	1.89	
Oregon	Missouri			.01	T.	1.09			.11	.31													.17			.24	.10				T.		2.03	
Palmyra	Mississippi	.06			.01	.24		.02	.31	2.93								T.							.20		.90						4.67	
Paris	do				.17				.81	.19								.20							.18			.64				.10	2.29	
Perry	do					.11		T.	.84									.26							.12			.71				.09	2.13	
Philadelphia	do				.22				.80	1.02																		.75				.20	2.99	
St. Charles	Missouri					.04	.10	.90	.06									.13					.06	.43		.14	.94						2.80	
St. Joseph	do				.62	.08	T.	.22	.36																							.01	2.48	
Shelbina	Mississippi				.10	.01			.24	.86								.13					.15					.78				.11	2.29	
Shelbyville	do	.07			.15				.28	.58																		.90				.14	2.12	
Steffenville	do				.10	.15			1.15	.52								.07														.10	2.93	
Tarkio	Missouri				.15	.77			.03														.10			.45	.26						1.31	
Trenton	Grand				T.	.71	.11		.76								.01										.12	.14				T.	2.01	
Troy	Mississippi	.02						T.	.03	.56	.10												.02	.32			.29						2.85	
Unionville	Chariton				.27				.05	.75															.24						T.	T.	.07	1.69
Warrenton	Mississippi					.02		.03	.73	.14								.10						.30	.30		.85	.42			T.		.12	3.01
Keokuk, Ia.	do				T.	.39	T.	T.	.49	.07							T.	.03							.14			.53			T.		.15	1.80
Southwestern Division																																		
Appleton City	Osage				1.05	.90	1.20	1.30														.06				.69	.04						5.24	
Boonville	Missouri				.14	.21	.04		.12	.14								.06					.08	.02		.69	.10						2.05	
Buffalo	Osage					.22	1.03	.08	.20														.12	.29		.73							2.67	
Caplinger Mills	do				T.	.23	T.	.39	.25									T.					.37	T										

## Daily Precipitation for October 1936—Continued from preceding page

Stations	Drainage-basins	Day of month																																Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Southeastern Div.—Continued																																		
Cape Girardeau	Mississippi						T.	.30	.26	.38	.05							.05					.82	.29	.01	.16	.55						2.87	
Caruthersville	do							.70	1.05	1.37	.18						.10	.09					.32	.28		.05	1.10						5.24	
Centerville	Black																																3.69	
Crystal City	Mississippi						.05	.37	.06	1.88	.06							.17					.06	1.02			.02						3.40	
Cuba	Meramec						.25			1.20													1.05				.90						6.44	
Dexter	St. Francis							1.50	.54	1.01													1.15	.32	.02		1.90						5.45	
Douglas	Black						T.	.95	.18	.75	.02							.03					.03	1.18	.10		2.19	.02		T.			5.03	
Farmington	St. Francis						**	**	1.05	1.63												**	**	**		**	2.35						3.89	
Fisk	do							.06	.07	1.42							.19						.38	.61		.27	.89						6.38	
Fredericktown	do							2.70	.32	.62	.12						.04						1.53			.05	1.00						5.47	
Goodland	Black						.56	.75		2.10												.56	.40	.08		.90	.12						5.51	
Greenville	St. Francis						.16	.76		1.65												.35	1.35			1.24							5.47	
Jackson	Mississippi							.40	.16	.42											.06		.04	.93	.06		.75	.16					2.98	
Koshkonong	Black						.19	.85	.86													.68	1.06	.10		2.00							5.74	
Leeper	do							.78	.21	.83	.04												1.90	.26		12	1.24						5.38	
Licking (near)	Gasconade					.48	.26		.76														.53			**	1.22						3.25	
Marble Hill	Mississippi						.08	.70	.45	.43												.05	1.20			1.04							3.95	
Meramec Park	Meramec						.30	.08	.11	1.30	.05											.60	.12			.52	.38						3.46	
Morehouse	Mississippi						2.57		.48														1.66	.08		1.44	.29						6.52	
New Madrid	do							.02	.72	.60	.20												.75	.42	.07	T.	1.52				T.		4.45	
Owensville	Gasconade						.48	.11	.04	.64									.24				.44			T.	.58					.09	2.62	
Parma	St. Francis							.85	.72	.57													.87	.15			1.55						4.71	
Poplar Bluff	Black							.32	T.	1.90	T.												1.06	.22		.95	1.14						5.59	
Rolla	Meramec						.43	.33	.08	.70	.31							.10					.78			.28	.68					.04	3.73	
St. Louis***	Mississippi						T.	.73	.09	.05	.56	.03						.13					.54			.59	T.			T.		.07	2.79	
St. Louis University*	do						.27	.13	.09	.66	.02							.04					.48			.57	.01			.04		.04	2.31	
Salem	Meramec						.20	.37	.03	.54													.27	.26		1.37							3.04	
Sikeston	Mississippi						T.	.81	.27	1.42	.07							.04	.06						.80	.40	.02	1.47					4.45	
Union	Meramec						T.	.09	.02	1.52	.07								.17				T.	.48			.14	.76					.06	3.31
Valley Park	do						.04	.44	.03	.72	.14	T.						.17					T.	.77			.07	.70					.03	3.11
Williamsville	Black							.68	.28	1.65	T.												1.51	.33	.03	.21	1.13						5.82	
Willow Sprgs. (near)	White						.12	1.22	.11	.32	.01												T.	.75	.17		.36	1.24				.01	4.34	
Zalma	Mississippi							.94		.06													1.04			.00	1.02						3.06	
Cairo, Ill.***	do						.03	.40	.25	.64								T.	.10				.20	.83	.02	1.34	T.		T.		T.		3.81	

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. †† Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. T. Trace, or less than 0.01 inch.  
 \*\*\* Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. \*\* Precipitation in the next following measurement; separate dates of fall not recorded. \* Precipitation is for 24-hour period, midnight to midnight † Estimated. ‡ Partially estimated. |||| Incomplete.

**Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for October 1936**  
 (See precipitation data in table on preceding page)

Station	Data	Day of month																														Monthly	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		31
Lakeside ..... (Osage Dam)	{ Evaporation .....	.036	.138	.106	.146	.139	.162	.007	.013	.012	.131	.106	.130	.151	.159	.158	.143	.139	.152	.123	.145	.251	.034	.070	.036	.096	.006	.045	.047	.086	.093	.162	3.222
	{ Mean temperature ..	59	62	62	65	70	61	61	62	65	56	57	58	64	64	64	64	58	62	66	70	49	42	44	48	48	38	40	46	52	52	52	56.8
	{ Wind movement ..	62	49	49	50	68	58	62	47	56	119	97	56	56	54	50	47	71	86	51	61	110	77	60	54	58	96	62	46	72	54	92	2,030

Observations taken at 7.30 a. m. Wind movement corrected to true velocities. For description see April 1932 report.

ERRATA.—September 1936 page 42: Prevailing wind direction for Southwestern Division should be SW; prevailing wind direction for Southeastern Division should be S.



## Daily Temperatures for October 1936

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Northern Division																																	
Brunswick	Maximum	64	68	72	78	80	71	77	66	68	64	67	73	81	80	79	78	68	78	81	82	76	48	49	61	57	56	46	56	66	63	68	68.4
	Minimum	48	41	50	52	59	63	51	57	61	51	42	45	53	54	52	49	49	43	54	65	43	33	29	30	49	34	29	33	42	33	53	46.8
Chillicothe	Maximum	63	70	78	82	81	67	61	63	66	61	68	75	81	78	79	73	57	81	83	82	63	44	52	63	56	42	41	61	66	63	71	66.9
	Minimum	47	37	46	55	54	59	51	51	55	47	39	45	50	53	53	47	45	42	52	56	40	29	23	30	36	31	30	30	35	33	37	43.2
Columbia	Maximum	63	66	74	77	80	68	65	61	71	60	67	73	78	76	75	75	59	74	82	82	71	42	44	61	56	38	41	56	64	62	68	65.6
	Minimum	48	44	52	56	61	62	57	58	59	49	43	47	55	56	52	43	43	57	64	42	36	33	31	38	33	30	33	42	34	51	47.3	
Fayette	Maximum	63	70	76	77	82	72	65	63	71	65	69	75	81	79	78	78	69	68	82	83	73	46	49	61	76	56	45	58	67	63	66	68.6
	Minimum	44	41	45	51	58	60	55	56	61	50	40	41	49	52	49	45	39	49	59	44	35	29	26	44	34	28	30	38	30	50	41.4	
Grant City	Maximum	62	60	74	68	69	70	58	59	63	62	55	75	68	66	65	66	56	79	79	80	66	43	47	53	53	38	35	48	60	62	58	61.2
	Minimum	44	40	52	59	55	56	49	51	57	48	38	44	58	48	58	49	41	45	51	63	37	28	22	30	37	28	22	29	36	33	49	43.8
Hannibal	Maximum	58	66	73	74	79	73	67	62	67	63	67	73	78	78	76	77	65	76	81	83	79	46	47	60	54	47	52	43	56	65	60	66.7
	Minimum	46	41	49	55	59	61	57	56	61	52	41	47	53	57	57	55	47	42	55	63	44	35	28	33	47	33	30	33	43	36	46	47.3
Kansas City	Maximum	62	71	78	78	84	69	60	61	65	60	67	76	81	79	77	72	59	84	83	84	50	42	52	62	56	38	41	59	67	67	72	66.4
	Minimum	49	43	52	61	62	58	52	57	59	47	41	52	59	57	56	49	49	52	60	50	42	32	29	37	38	32	52	37	44	34	60	47.9
Kidder	Maximum	60	65	75	73	78	66	60	61	68	58	61	74	76	75	76	69	55	77	80	80	43	40	48	58	58	33	40	56	64	60	71	63.3
	Minimum	45	38	42	48	55	55	48	49	54	46	39	41	47	53	53	51	44	41	47	56	38	28	24	24	32	29	28	29	32	36	36	41.6
Kirksville	Maximum	62	66	74	74	78	71	63	...	65	62	69	73	79	79	77	76	61	79	79	81	75	42	51	60	56	55	45	57	67	58	65	66.6
	Minimum	47	37	40	54	56	60	51	...	52	48	41	45	53	50	53	51	41	41	53	63	41	36	24	33	46	32	23	32	41	29	48	44.1
Louisiana	Maximum	65	66	74	76	80	75	65	65	78	68	67	75	76	80	76	75	65	75	80	84	65	50	45	60	50	45	45	55	60	60	72	66.8
	Minimum	42	40	40	39	40	60	58	62	61	55	42	42	48	53	58	47	52	40	50	60	47	36	31	26	43	40	30	40	29	46	41.7	
Macon	Maximum	63	67	75	75	79	70	60	64	68	63	68	73	80	79	79	77	57	76	81	85	46	42	48	60	56	37	41	55	65	60	66	65.2
	Minimum	45	44	53	63	61	53	54	55	50	40	47	50	57	51	53	45	42	55	59	42	32	26	30	38	32	27	29	36	31	34	41.5	
Maryville	Maximum	59	63	75	73	79	70	59	62	64	60	65	74	73	68	65	55	78	81	81	55	43	49	60	60	39	40	58	64	62	71	63.9	
	Minimum	44	41	50	58	54	55	47	50	56	45	37	42	49	55	50	42	42	47	55	37	28	24	28	30	28	21	27	35	38	51	42.7	
Mexico	Maximum	62	68	70	74	67	71	62	63	73	60	63	72	75	72	75	73	53	75	83	80	58	42	50	60	55	49	49	58	66	62	67	64.7
	Minimum	44	39	44	51	59	59	56	54	51	52	42	44	50	52	54	49	46	42	49	55	46	36	29	27	30	34	30	32	33	30	30	43.5
Moberly	Maximum	61	67	74	75	78	70	62	61	70	60	67	73	78	78	76	77	57	75	81	82	70	42	46	50	55	40	43	55	65	60	66	65.3
	Minimum	47	38	48	54	58	60	54	55	59	50	42	45	43	54	52	49	43	42	54	62	41	34	27	32	40	31	27	32	41	29	49	44.9
Oregon	Maximum	63	68	77	76	82	71	59	62	62	60	68	76	76	77	68	61	82	83	81	51	45	51	52	59	39	45	40	68	65	75	65.9	
	Minimum	43	41	51	62	66	57	48	51	56	45	39	47	53	48	56	51	43	46	54	50	37	28	25	34	39	29	23	30	40	55	44.7	
St. Joseph	Maximum	62	69	77	77	82	68	59	61	65	60	67	76	78	75	77	68	61	82	83	81	51	45	51	52	59	39	45	48	67	66	75	65.5
	Minimum	47	42	52	60	58	54	50	55	58	45	43	50	56	52	58	52	46	47	56	44	37	30	26	33	38	28	28	34	42	39	59	45.7
Trenton	Maximum	68	65	67	76	80	72	66	65	65	60	68	74	77	78	77	72	70	79	84	82	71	44	49	63	58	49	42	59	60	59	70	66.9
	Minimum	47	38	50	58	57	59	50	51	50	49	40	42	50	51	55	49	45	43	43	60	42	30	25	30	34	30	28	30	42	30	52	43.9
Unionville	Maximum	61	64	74	72	78	69	61	64	65	61	68	60	75	72	76	76	56	79	75	80	44	42	49	59	58	37	41	55	66	62	68	63.5
	Minimum	45	40	43	53	57	57	50	51	53	49	41	41	47	49	50	53	40	42	47	53	39	28	25	25	33	31	20	24	33	30	41.3	
Warrenton	Maximum	68	66	73	80	81	74	65	64	74	66	67	74	79	77	76	77	73	74	82	81	75	44	44	60	55	45	44	55	64	61	67	67.6
	Minimum	55	49	50	51	58	60	63	59	63	54	44	48	50	53	51	55	48	42	52	62	44	40	34	32	43	36	28	32	42	37	46	47.8
Southwestern Division																																	
Appleton City	Maximum	66	72	78	78	84	70	62	59	65	61	73	74	81	79	80	80	67	80	82	83	70	44	47	62	58	55	47	59	68	69	66	68.4
	Minimum	46	43	48	58	59	56	50	48	47	47	45	42	51	49	48	49	46	42	51	63	42	35	33	29	45	32	33	32	39	35	53	45.0
Clinton	Maximum	62	64	77	80	82	72	64	65	66	61	70	74	80	78	77	80	78	80	82	82	50	52	60	60	56	44	58	61	67	67	63	68.5
	Minimum	48	43	50	53	58	58	54	58	50	50	42	42	57	50	50	50	44	54	63	43	38	32										





## CLIMATOLOGICAL DATA

19

## MISSOURI SECTION

ROSCOE NUNN  
ST. LOUIS, MO.

Vol. XL

NOVEMBER 1936

No. 11

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## GENERAL SUMMARY

The temperature averaged, for the State, considerably below normal and was the same as the average for November 1935, but the precipitation was much less and the sunshine much more for the present month than in November 1935. The average number of clear days in the month just closed was 21, which has been equaled once before in November (1904), but never exceeded, and this was in strong contrast with November 1935, which had only 8 clear days.

There were but few days with temperature much above normal; on the other hand, periods of subnormal temperatures were quite marked, especially about the 3d to 10th, inclusive, and the 25th to 27th, inclusive, with hard freezing pretty general on several of the dates mentioned. On the 27th zero was registered at Greenville and 4° above at Goodland, showing the coldest November weather since 1932.

Precipitation occurred in only two periods; first, during the 1st-3d, and second, on the 26th. Most stations had measurable precipitation on only two days. Rainfall in substantial amount occurred generally on the 1st-2d, and some very heavy amounts were reported over small areas, principally in the counties of Barton, Cedar, Miller, Cole, Osage, Gasconade, and Warren. The second precipitation period, on the 26th, brought the first substantial general snowfall of the season. The snow was heaviest in the southeastern counties, where it was unusually heavy for so early in the season. In the western half of the State the snowfall was light or moderate.

Thunderstorms, with high wind, on the 2d, caused damage in some localities. (See "Miscellaneous Phenomena").

As there was no substantial precipitation over most of the State after the 3d, except light to moderate snowfall on the 26th, winter crops were showing need of moisture in the last week or two, especially in the northern third of the State, where subsoil moisture was quite deficient. Wheat, barley, rye, and grass were short and making very little growth, but apparently in fairly healthy condition. Livestock generally was in fair to good condition, but considerable feeding was necessary. The open weather was favorable for farm work, which progressed well.

Rivers were unusually low during the last week or two. Most creeks and springs were very low.

## TEMPERATURE

The monthly mean temperature for the State, 72 stations reporting, was 42.2°, or 2.2° below normal. The highest monthly mean was 45.6° at Caruthersville and Seligman, and the lowest monthly mean was 36.6° at Unionville. The highest temperature recorded was 79° at Kansas City, Mexico, Harrisonville, and Lamar, on the 1st, and at Caruthersville on the 2d, and the lowest was 0° at Greenville on the 27th. The greatest daily range was 52° at Arcadia on the 28th.

## PRECIPITATION

The average precipitation for the State, 128 stations reporting, was 1.89 inches, or 0.77 inch less than normal. The greatest local monthly amount was 4.99 inches at Jefferson City, and the least local monthly amount was trace at Unionville. The greatest amount in any twenty-four hours was 4.74 inches at

Jefferson City on the 2-3d. The average number of days with 0.01 inch or more of precipitation was 3. The snowfall averaged 1.4 inches, or 0.4 inch more than normal. The greatest monthly snowfall was 6.5 inches at Parma.

## MISCELLANEOUS PHENOMENA

Dust.—Locally on 20th, 21st, 22d, 23d, 24th, 25th, mostly in northwestern portions.

(Continued on page 54)

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind			Relative humidity			Percentage of sunshine	
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	7 a. m.	12 noon		7 p. m.
Columbia.....	30.20	30.59	19	29.52	2	8.9	27	n.	24	79	56	62	72
Kansas City.....	30.21	30.63	19	29.48	2	11.0	36	n.	26	74	44	51	82
St. Joseph.....	30.20	30.64	19	29.51	2	9.6	30	nw.	24	72	44	52	81
St. Louis.....	30.18	30.60	19	29.62	2	12.5	44	sw.	2	73	53	57	76
Springfield.....	30.21	30.48	19	29.65	2	10.0	30	nw.	26	72	48	53	79
Cairo, Ill.....	30.20	30.53	19	29.76	2	9.1	26	s	2	78	52	58	69
Keokuk, Iowa..	30.18	30.67	18	29.54	2	8.8	24	w.	2	74	50	58	68

## COMPARATIVE DATA FOR NOVEMBER

Year	Temperature			Precipitation					Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy
1888.....	41.6	87	15	3.39	2.57	2.95	4.64	....	7	..	..	..
1889.....	39.9	76	6	3.52	3.16	3.12	4.29	0.6	7	..	..	..
1890.....	46.5	80	14	2.38	1.96	2.48	2.70	T.	5	..	..	..
1891.....	39.6	82	7	4.14	2.67	3.24	6.51	..	8	..	..	..
1892.....	40.1	79	9	2.75	2.17	2.14	3.95	..	6	..	..	..
1893.....	40.9	79	1	1.70	1.32	1.60	2.17	0.3	4	14	9	7
1894.....	41.0	80	3	1.56	1.59	1.71	1.39	T.	4	15	9	6
1895.....	41.6	82	4	3.60	2.62	3.42	4.76	3.2	8	10	7	13
1896.....	42.3	82	5	2.43	1.47	2.30	3.53	0.2	6	11	7	12
1897.....	43.4	82	3	2.63	1.92	2.02	3.96	T.	6	13	8	9
1898.....	39.9	79	8	2.32	2.03	2.43	2.50	2.3	6	14	8	8
1899.....	49.5	82	16	2.02	1.38	2.00	2.67	0.2	7	11	9	10
1900.....	43.7	84	7	2.99	1.52	2.71	4.75	0.2	6	15	7	8
1901.....	43.6	84	9	1.48	0.99	1.63	1.82	0.3	4	17	7	6
1902.....	50.1	85	18	3.73	3.05	3.64	4.51	0.4	9	8	9	13
1903.....	40.9	79	2	1.27	1.24	1.09	1.48	1.1	5	13	8	9
1904.....	46.3	83	11	0.22	0.18	0.24	0.24	T.	2	21	5	4
1905.....	45.8	83	2	1.87	2.36	1.35	1.89	T.	6	18	6	6
1906.....	42.5	88	3	3.56	2.55	2.68	5.44	5.0	8	12	6	12
1907.....	43.8	88	11	2.24	1.39	1.91	3.43	T.	4	19	4	7
1908.....	47.6	87	9	3.90	2.70	4.67	4.33	0.2	8	15	7	8
1909.....	53.6	87	11	4.32	3.92	4.98	4.05	0.4	8	12	7	11
1910.....	42.0	83	11	0.35	0.31	0.22	0.52	0.1	3	15	8	7
1911.....	39.1	83	3	2.63	2.07	2.78	3.04	1.1	7	13	6	11
1912.....	45.9	85	12	1.50	1.46	1.31	1.73	0.1	3	20	5	5
1913.....	51.7	80	11	2.71	2.61	2.69	2.83	T.	7	10	8	12
1914.....	48.6	89	2	0.69	0.36	0.64	1.08	0.1	3	19	6	5
1915.....	49.5	87	12	2.83	2.30	2.78	3.42	0.1	5	16	7	7
1916.....	46.9	85	3	2.46	2.25	2.63	2.51	0.1	4	19	4	7
1917.....	46.1	80	8	1.23	0.10	1.61	1.98	T.	3	14	5	11
1918.....	44.9	85	12	3.26	2.85	4.14	2.78	1.2	6	15	4	11
1919.....	42.2	78	2	3.57	3.06	3.19	4.45	1.0	6	15	5	10
1920.....	40.9	82	6	1.06	1.64	0.82	0.73	T.	6	12	6	12
1921.....	45.6	84	10	3.11	0.89	1.59	6.85	0.4	5	13	7	10
1922.....	47.8	84	15	3.68	3.70	3.97	3.38	T.	7	16	6	8
1923.....	45.1	79	14	2.25	1.39	2.79	2.57	3.0	6	15	6	9
1924.....	46.7	88	4	1.78	1.16	2.08	2.09	0.5	4	15	8	7
1925.....	42.8	80	2	3.05	1.74	2.78	4.63	2.0	6	16	6	8
1926.....	39.6	78	0	3.01	2.13	2.86	4.04	4.2	7	11	7	12
1927.....	46.8	89	12	3.66	2.07	3.78	5.13	0.9	7	6	9	15
1928.....	44.6	79	9	5.02	5.91	4.88	4.26	0.5	10	13	4	13
1929.....	39.0	78	8	1.46	1.40	1.00	1.98	2.1	6	11	8	11
1930.....	45.8	83	8	2.93	2.94	3.28	2.56	T.	5	18	5	7
1931.....	52.2	87	17	5.42	5.58	5.32	5.35	1.4	11	10	5	15
1932.....	39.5	75	9	1.87	1.55	2.11	1.95	4.5	5	16	5	9
1933.....	45.9	83	7	0.93	0.47	0.96	1.37	0.2	4	16	6	8
1934.....	48.5	84	16	5.71	5.62	5.84	5.67	4.6	10	14	5	11
1935.....	42.2	82	10	4.16	4.52	4.69	3.28	0.1	10	8	4	18
1936.....	42.2	79	0	1.89	1.15	2.04	2.49	1.4	3	21	4	5
Period.....	44.4	89	9	2.66	2.16	2.60	3.22	1.0	6	14	6	10



## Climatological Data for November 1936

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.							Precipitation, in inches				Number of days				Prevailing direction of wind	Observers
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelted	With precip., .01 inch or more	Clear	Partly cloudy	Cloudy		
Northern Division																				
Bethany	Harrison	916	41	40.8	- 2.0	75	1	17	27	37	0.62	-1.42	0.31	0.8	3	21	5	4	nw.	A. S. Cumming
Brunswick	Chariton	652	55	40.2	- 1.4	77	1	16	27	46	0.88	-1.31	0.45	2.5	4	24	0	6	nw.	O. K. Beuecke
Chillicothe	Livingston	779	27	38.6	- 3.1	77	1	15	4 <sup>†</sup>	45	0.35	-1.77	0.14	1.0	3	23	2	5	e.	Wm. J. Olenhouse
Clifton Hill	Randolph	731	37	41.1	- 2.3	77	1	13	27	31	1.10	-0.88	0.98	1.0	2	18	4	8	sw.	Dr. A. J. Bradsher
Columbia	Boone	740	46	40.7	- 2.6	76	1	14	27	37	1.48	-0.72	1.24	2.8	2	19	5	6	sw.	U. S. Weather Bureau
Conception	Nodaway	980	47	39.8	- 1.6	74	1	14	8	34	0.31	-1.43	0.16	T.	2	19	6	5	nw.	Fr. Adelhelm Hess
Downing	Schuyler	876	15	40.6	- 1.0	75	1	12	27	35	1.02	-0.96	0.50	2.7	3	23	2	5	n.	Everett Rowe
Edgerton	Platte	856	16	41.4 <sup>a</sup>	- 0.4	77	1	14	27	42	0.26	-1.71	0.24	0.1	2	25	1	4	s.	Fred L. Stiff
Elsberry	Lincoln	449	5	40.8	.....	73	1	13	27	41	3.23	.....	3.13	1.0	2	19	8	3	n.	Ray E. Mills
Fayette	Howard	680	56	40.7	- 1.5	74	1	6	27	41	1.47	-0.63	1.24	3.0	2	18	7	5	s.	Harry P. Mason
Fulton	Callaway	818	48	41.2	- 3.0	75	1	11	27	40	2.55	+0.24	2.28	2.7	4	20	4	6	w.	Clyde C. Herring
Garin	Scotland	700	49	.....	.....	.....	.....	.....	.....	.....	1.01	-1.02	0.55	3.5	3	21	5	4	nw.	W. L. Harker
Grant City	Worth	1,134	32	39.0	- 2.9	74	1	13	27	36	0.36	-1.49	0.22	0.4	3	20	3	7	nw.	Howard Rybolt
Hannibal	Marion	759	44	41.4	- 0.7	74	1	13	27	37	2.08	+0.02	1.86	3.0	2	19	3	8	s.	Hannibal Water Dept.
Kansas City	Jackson	741	47	42.4	- 1.3	79	1	20	3	48	0.19	-1.64	0.19	T.	2	19	7	4	sw.	U. S. Weather Bureau
Kidder	Caldwell	1,020	44	37.0	- 4.8	70	1	15	27	46	0.30	-1.85	0.14	0.5	3	22	3	5	s.	Roscoe L. Terry
King City	Gentry	1,095	10	.....	.....	.....	.....	.....	.....	.....	0.14	-1.82	0.10	1.0	2	21	3	6	nw.	John M. Martin
Kirkville	Adair	969	47	40.5	- 0.1	76	1	13	27	36	0.93	-1.19	0.78	1.5	2	16	7	7	sw.	Prof. J. S. Stokes
Linn	Linn	816	4	.....	.....	.....	.....	.....	.....	.....	0.28	.....	0.19	1.0	3	22	4	4	sw.	H. D. Taggart
Louisiana	Pike	469	42	39.3	- 4.8	75	1 <sup>†</sup>	14	27	35	1.78	-0.68	1.70	0.8	2	21	3	6	w.	Stark Bro's Nurseries
Macon	Macon	875	37	38.4	- 4.4	76	1	15	27	37	0.92	-1.27	0.45	1.0	3	22	4	4	w.	W. C. Brown
Marion	Nodaway	1,169	46	39.2	- 0.2	75	1	13	8	37	0.18	-1.74	0.07	0.4	3	20	4	6	nw.	R. B. Montgomery
Mexico	Andrew	800	47	40.2	- 2.7	79	1	13	27	42	1.48	-0.75	0.65	2.0	3	25	0	5	w.	Mrs. Abbie Snoddy
Moberly	Randolph	875	0	39.8	.....	76	1	15	27	36	1.57	.....	1.39	2.0	2	22	3	5	w.	J. W. Adams
Monroe City	Monroe	748	15	.....	.....	.....	.....	.....	.....	.....	1.68	-0.64	1.42	3.0	2	20	7	3	s.	J. S. Conway
Oregon	Holt	1,018	80	41.2	+ 0.7	76	1	13	8	36	0.19	-1.79	0.10	T.	2	20	8	2	sw.	Miss Mina Wright
St. Charles	St. Charles	520	48	41.6	- 3.7	74	1	14	27	46	2.70	+0.59	1.90	1.0	4	24	3	3	nw.	Martin L. Comann
St. Joseph	Buchanan	957	26	41.2	- 2.2	77	1	17	8	43	0.04	-1.59	0.02	T.	3	20	7	3	nw.	U. S. Weather Bureau
Shelbina	Shelby	779	43	.....	.....	.....	.....	.....	.....	.....	1.11	-0.99	0.64	3.0	3	.....	.....	.....	.....	J. C. Jewett
Steffenville	Lewis	650	38	41.0	- 2.5	76	1	9	27	43	1.07	-1.12	0.75	3.0	3	20	4	6	s.	Frank Hall
Tarkio	Atchison	916	33	38.6	- 1.5	76	1	12	8	39	0.13	-1.61	0.13	T.	1	20	2	8	nw.	Albert Volker
Trenton	Grundy	822	40	41.2	- 1.0	76	1	16	4	39	0.54	-1.58	0.37	1.0	3	17	11	2	s.	W. H. Estes
Unionville	Putnam	1,062	43	36.6	- 3.7	74	1	13	27	46	T.	-2.20	T.	T.	0	23	1	6	n.	John H. Schick
Warrenton	Warren	816	54	43.0	- 0.2	73	1	13	27	35	4.88	+1.76	4.18	2.0	2	19	5	6	nw.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.	574	65	39.3	- 1.8	74	1	13	27	32	0.84	-1.10	0.57	0.5	3	15	7	8	sw.	U. S. Weather Bureau
Division means and extremes		.....	.....	40.2	- 2.0	79	1	6	27	48	1.15	-1.01	4.18	1.4	3	21	4	5	nw.	
Southwestern Division																				
Appleton City	St. Clair	853	41	42.6	- 3.4	77	1	19	27	37	1.13	-1.17	1.13	0	1	26	1	3	sw.	Rolla Brown
Buffalo	Dallas	1,200	6	.....	.....	.....	.....	.....	.....	.....	2.12	.....	2.12	0	1	25	2	3	.....	C. M. McCallister
Captlinger Mills	Cedar	750	10	.....	.....	.....	.....	.....	.....	.....	3.16	+0.40	3.16	T.	1	20	3	7	nw.	Ozark Utilities Co.
Clinton	Henry	765	43	42.6	- 4.4	77	1	20	27	37	0.80	-1.36	0.80	0	1	21	6	3	sw.	A. E. Derwent, M. D.
Concordia	Lafayette	784	21	.....	.....	.....	.....	.....	.....	.....	0.80	-1.42	0.77	0.4	3	22	0	8	n.	Miss Ora Stratman
Dean	McDonald	1,000	32	44.2	- 5.1	77	1	15	27	42	2.68	-0.67	2.68	0	1	19	4	7	sw.	E. S. Taylor
Eldon	Miller	934	41	41.3	- 3.5	76	1	16	27	47	4.14	+1.69	2.52	1.5	4	20	6	4	s.	E. H. Shepherd
Garber	Taney	950	1	44.5	.....	78	1	15	27	47	1.26	.....	1.26	0	1	14	7	9	e.	William H. Durham
Hailey	Barry	1,350	11	.....	.....	.....	.....	.....	.....	.....	2.50	-0.61	2.50	T.	1	22	6	2	w.	A. W. Madison
Harrisonville	Cass	904	58	40.0	- 2.5	79	1	18	4	49	0.60	-1.54	0.60	0	2	24	3	3	sw.	John H. Patterson
Jefferson City	Cole	557	46	40.4	- 3.7	75	1	14	27	45	4.99	+2.60	4.74	3.0	3	24	3	3	s.	Mrs. Frank Kliegel
Lamar	Barton	980	48	43.4	- 2.9	79	1	20	4	42	4.10	+1.57	4.10	0	2	21	5	4	sw.	Jesse A. Mann
LaMonte	Pettis	867	35	42.4	- 2.0	75	2	16	27	47	1.20	-1.05	1.10	1.0	2	6	18	6	nw.	J. E. Wheeler
Lebanon	Laclede	1,265	48	41.2	- 4.4	74	1	16	27	44	1.90	-0.65	1.34	T.	4	21	5	4	se.	Mrs. Lou Mulcare
Lexington	Lafayette	688	51	41.6	- 2.6	77	1	20	4 <sup>†</sup>	46	4.04	-1.63	0.39	0.8	4	23	5	2	w.	Miss Carrie Loomis
Lockwood	Dade	1,078	30	44.5	- 2.5	75	1	22	27	34	2.35	-0.49	2.35	T.	1	23	4	3	sw.	Hubert A. Nieman
Marshall	Saline	779	49	43.3	- 1.9	77	1	16	26 <sup>†</sup>	37	1.25	-1.07	0.95	3.0	2	22	6	2	sw.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	35	44.0	- 1.9	73	2	16	27	35	3.12	+0.17	3.10	0	2	21	6	3	sw.	Mo. Fruit Exp. Sta.
Neosho	Newton	1,011	49	45.4	- 1.9	78	1	17	27	43	2.27	-1.03	2.27	0	1	23	3	4	sw.	U. S. Fisheries Sta.
Nevada	Vernon	862	43	44.1	- 0.7	78	1	21	4	34	2.00	-0.15	2.00	0	1	24	4	2	sw.	T. J. Kaupp
Seligman	Barry	1,512	35	45.6 <sup>a</sup>	- 1.7	74	1	18	4	38	1.63	-1.46	1.61	0	2	22 <sup>b</sup>	1 <sup>b</sup>	5 <sup>b</sup>	w.	Floyd E. Fawver
Seymour (near)	Webster	1,642	30	43.1	- 2.8	72	1	17	27	38	1.94	-0.95	1.94	T.	1	22	3	5	nw.	A. L. Hailey
Springfield	Greene	1,301	48	43.0	- 2.7	75	1	22	27	36	1.38	-1.41	1.38	T.	1	21	5	4	nw.	U. S. Weather Bureau
Versailles	Morgan	1,037	4	44.3	.....	76	1	14	27	37	3.11	+0.74	2.92	1.6	3	21	4	5	w.	I. M. Wilson
Warrensburg	Johnson	878	49	43.4	- 1.6	76	1	18	27	36	0.70	-1.52	0.70	T.	1	22	4	4	sw.	E. A. Markey
Warsaw	Benton	687	35	43.4	- 3.8	77	1	16	27	39	1.36	-1.28	1.36	0	1	23	2	5	w.	Everett Martin
Division means and extremes		.....	.....	43.1	- 2.8	79	1	14	27	49	2.04	-0.55	4.74	0.4	2	21	5	4	sw.	
Southeastern Division																				
Arcadia	Iron	926	55	40.8	- 3.1	72	2 <sup>†</sup>	11	28	52	2.09	-1.03	1.92	2.2	4	22	5	3	n.	Arcadia College
Birch Tree (near)	Shannon	1,000	41	44.0	- 2.6	70	14 <sup>†</sup>	17	27	39	1.48	-1.68	1.48	0	1	23	3	4	n.	V. H. Kirkendall
Campbell	Dunklin	314	10	45.3	- 2.3	76	2 <sup>†</sup>	15	27	40	2.79	-0.91	1.92	1.5	3	20	7	3	s.	Jeff. King
Caruthersville	Pemiscot	265	40	45.6 <sup>b</sup>	- 4.8	79	2	19	27	44	1.65	-2.20	1.2.							



## Day of month

Continued on next page

## Daily Precipitation for November 1936—Continued from preceding page

Stations	Drainage-basins	Day of month																														Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		..
Southeastern Div.—Concluded																																	
Cape Girardeau	Mississippi	T.	.05	2.02	T.																							.12	.05				2.24
Caruthersville	do			1.25	.10																							.30					1.65
Centerville	Black		1.80	.49																								.30					2.59
Crystal City	Mississippi		1.58	1.67																								.12	.02				3.39
Cuba	Meramec		2.00																									.30					2.30
Dexter	St. Francis		T.	1.75	.37																							.31					2.43
Doniphan	Black	T.		1.98																								.10					2.08
Farmington	St. Francis		**	1.77																								.16					1.93
Fisk	do	T.	.29	2.31																								.16	T.				2.76
Fredericktown	do			2.47																								.11					2.58
Goodland	Black		2.40																									.40					2.80
Greenville	St. Francis	1.50		1.40																								.24					3.14
Jackson	Mississippi	.48		1.87																								.18					2.53
Koshkonoong	Black		1.75	.04																								.02					1.81
Leeper	do		.25	2.20					T.																			.26	T.				2.71
Licking (near)	Gasconade	.25	1.50	T.																								.03					1.78
Marble Hill	Mississippi	.55		1.35																								.25					2.15
Meramec Park	Meramec		2.39	1.77																								.10	T.				4.26
Morehouse	Mississippi	.04		1.68	.49																							.31					2.52
New Madrid	do	.07		2.92	.62				.01																			.20	.01				3.83
Owensville	Gasconade		.30	2.35																								.17					2.82
Parma	St. Francis		.12	2.10	.72																							.20					3.14
Poplar Bluff	Black			2.46	T.																							.22					2.68
Rolla	Meramec		.05	1.79																								.22					2.06
St. Louis***	Mississippi	T.	2.11				T.		T.																			.09					2.20
St. Louis University*	do	T.	1.94																									.08					2.02
Salem	Meramec		2.75	.14																								.14					3.03
Sikeston	Mississippi			1.43	.07																							.20					1.70
Union	Meramec		.49	1.95																								.12					2.56
Valley Park	do		.08	.62	1.70																							.10	.02				2.52
Williamsville	Black			2.00																								.22	T.				2.22
Willow Srgs. (near)	White			2.02																													2.02
Zalma	Mississippi			2.10																								.30					2.40
Cairo, Ill.***	do	.04	1.76	.66	.20				T.	T.																		.12					2.78

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. || Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. T. Trace, or less than 0.01 inch.  
 \*\*\* Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. \*\* Precipitation in the next following measurement; separate dates of fall not recorded. \* Precipitation is for 24-hour period, midnight to midnight. † Estimated. ‡ Partially estimated. ||||| Incomplete.

## Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for November 1936

(See precipitation data in table on preceding page)

Station	Data	Day of month																														Monthly	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		..
Lakeside ..... (Osage Dam)	{ Evaporation .....	.085	....	....	....	.114	.086	.065	.070	.045	.069	.057	.069	.051	.059	.141	.085	.097	.106	.079	.042	.170	.101	.243	.075	.146	.055	....	.131	.094	.064	....	2,570
	{ Mean temperature ..	68	64	32	36	42	44	40	36	42	40	44	48	50	50	45	42	48	45	40	50	46	46	40	40	34	30	34	44	36	36	..	43.0
	{ Wind movement ..	105	95	123	101	73	53	51	115	68	81	36	60	29	53	115	65	51	82	75	65	134	85	143	132	172	156	110	138	75	55	..	2,696

Observations taken at 7.30 a. m. Wind movement corrected to true velocities. For description see April 1932 report.

\*\*\* Evaporation included in next measurement.

Continued from page 51

Fog.—Dense, 7th, 9th, 10th, 12th, 13th, 20th, 29th.

Frosts.—Killing, 3d, 4th, (first of season at some southern stations).

Hail.—Moderate on 2d at Dean.

Halos.—Solar, 9th, 12th, 14th, 24th; lunar, 22d, 23d, 25th, 26th, 30th.

Sleet.—3d.

Smoke.—Dense, 6th, 12th, 13th, 26th.

Thunderstorms.—Local, 1st, 3d; more or less general, 2d.

Windstorms.—Severe at a few points on 2d, especially at Cape Girardeau, where the storm was reported as probably a tornado, with 1 person injured and property damage estimated at about \$75,000. Near Dean, McDonald County, some trees and small houses were blown down and 2 persons injured; property damage, about \$300.

## ERRATA

October 1936, page 47: Tarkio total snowfall unmelted should be T; Columbia mean temperature should be 56.5; departure should be -0.1. Page 50, maximum temperature at Columbia on 23d should be 45; mean maximum should be 65.7.



...etc., indicate respectively 1, 2, 3 etc., days missing from the record. §§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs. Records of daily temperatures are also kept at the following stations in Missouri: Bethauy, Clifton Hill, Conception, Dean, Downing, Elsberry, Edgerton, Fulton, Goodland, Greenville, Lakeside, Licking (near), Lockwood, Marble Hill, St. Charles, St. Louis University, Salem, Seligman, Seymour, Steffenville, Tarkio, and Versailles. These records are on file at the Weather Bureau Office, St. Louis, Mo. † Estimated. WRO, St. Louis, 12-22-36-995





## CLIMATOLOGICAL DATA

## MISSOURI SECTION

ROSCOE NUNN  
ST. LOUIS, MO.

VOL. XL

DECEMBER 1936

No. 12

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR

## GENERAL SUMMARY

It was the mildest December since 1933 and averaged almost 8° warmer than December 1935. With the exception of a sharp cold snap on the 6-7th, there were but few cold days. Zero or slightly below occurred at several northern stations on the 7th, and as low as 5° above in the Southwestern Division, but this was distinctly the coldest period of the month. The last ten days were very mild.

Precipitation averaged considerably more than normal in all Divisions, although a few stations in each Division received less than normal. In parts of Wayne, Stoddard, Dunklin, and Mississippi counties, in the Southeast, rainfall was much more than normal. Precipitation was well distributed through the month, occurring principally about the 5th, the 18th, and during the 26-30th.

Following a rather dry November, the comparatively generous precipitation of December was much needed and it gave a more promising outlook for winter crops and the restoration of sub-soil moisture. Top soil moisture was ample at the close of the month, but at depths of one foot or more the ground was still unusually dry in most sections. Winter grains and pastures were not up to normal in growth during December, but were otherwise in good condition for the most part, and furnished some pasturage. Plowing and other outdoor work progressed well in most of the State, especially in southern portions. Live-stock generally were in good condition.

River stages were much below normal throughout the month. At St. Louis a stage of 3.2 feet below zero occurred, which is the lowest stage (unaffected by ice conditions) of record for December.

## TEMPERATURE

The monthly mean temperature for the State, 72 stations reporting, was 38.4°, or 4.3° above normal. The highest monthly mean was 43.3° at Neosho, and the lowest monthly mean was 31.5° at Unionville. The highest temperature recorded was 69° at Brunswick on the 25th and at Dean on the 24th, and the lowest was 7° below zero at Grant City on the 7th. The greatest daily range was 43° at Chillicothe, Macon, Mexico, Unionville, Eldon, and Harrisonville on the 8th, Arcadia on the 13th, and Goodland on the 15th and 24th.

## PRECIPITATION

The average precipitation for the State, 129 stations reporting, was 2.83 inches, or 0.67 inch more than normal. The greatest local monthly amount was 6.29 inches at Dexter, and the least local monthly amount was 1.06 inches at Meramec Park. The greatest amount in any twenty-four hours was 3.50 inches at Greenville on the 30th. The average number of days with 0.01 inch or more of precipitation was 7. The snowfall averaged 2.2 inches, or 1.2 inches less than normal. The greatest monthly snowfall was 6.5 inches at Maryville.

## MISCELLANEOUS PHENOMENA

Fog.—Dense, 2d, 3d, 4th, 10th, 17th, 19th, 21st, 24th, 27th, 28th, 29th.

Glaze.—5th.

Hail.—Light, at St. Joseph and Maryville on 30th.

Halos.—Solar, 1st, 4th, 8th, 9th, 15th, 22d, 31st; lunar, 1st, 21st, 22d, 23d, 24th, 25th, 26th.

Sleet.—2d, 5th, 6th, 18th, 28th.

Smoke.—Dense, 2d, 14th, 15th, 21st.

Thunderstorms.—Local, 29th; more or less general, 30th.

Windstorms.—On 30th with some property damage at Jefferson City and in southern Polk County and near Fulton. (Amount of damage not estimated.)

## ERRATA

November 1936, page 52: Columbia mean temperature should be 40.8; departure should be - 2.5. Page 55, maximum temperature at Columbia on the 25th should be 39; mean maximum should be 51.2.

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)				Wind				Relative humidity			
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	7 a. m.	12 noon	7 p. m.
Columbia.....	30.15	30.49	22	29.39	30	8.3	25	w.	30	80	64	70
Kansas City.....	30.13	30.44	22	29.33	30	10.1	36	nw.	30	81	87	73
St. Joseph.....	30.12	30.46	7	29.28	30	8.9	27	nw.	6	82	87	74
St. Louis.....	30.18	30.54	22	29.43	30	12.2	36	s	30	78	62	69
Springfield.....	30.14	30.41	22	29.40	30	10.5	30	se.	5	80	68	71
Cairo, Ill.....	30.19	30.53	22	29.58	30	8.1	27	s.	30	82	67	67
Keokuk, Iowa...	30.17	30.55	22	29.29	30	8.2	27	w.	30	73	67	64

## COMPARATIVE DATA FOR DECEMBER

Year	Temperature			Precipitation						Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy	
1888.....	35.9	70	0	2.43	1.88	3.03	2.39	....	6	..	..	..	
1889.....	46.8	80	2	1.09	0.60	0.85	1.82	0.1	3	..	..	..	
1890.....	36.0	76	- 3	1.18	0.82	1.14	1.67	4.6	3	..	..	..	
1891.....	39.8	72	- 1	1.88	1.91	1.67	2.05	....	6	..	..	..	
1892.....	29.4	75	-22	2.50	1.69	2.76	3.04	4.8	6	8	7	16	
1893.....	35.2	76	- 7	0.97	0.80	0.67	1.44	2.7	5	11	11	9	
1894.....	36.7	75	- 7	2.41	1.19	2.33	3.70	1.3	5	14	8	9	
1895.....	34.3	69	- 8	6.40	5.12	8.57	5.50	3.4	8	9	8	14	
1896.....	38.6	79	- 5	0.92	0.84	1.17	0.75	T.	3	13	8	10	
1897.....	29.3	74	-14	3.03	1.92	2.98	4.19	6.3	7	8	8	15	
1898.....	28.7	74	-20	1.65	1.62	1.84	1.48	5.1	5	17	6	8	
1899.....	30.4	75	-13	2.22	1.90	2.02	2.74	6.6	9	12	9	10	
1900.....	35.6	68	- 3	0.79	0.47	0.55	1.35	0.6	4	14	8	9	
1901.....	28.5	71	-29	3.20	2.26	2.98	4.35	6.9	8	11	7	13	
1902.....	30.7	68	- 7	3.32	2.02	2.76	5.18	3.1	8	10	4	17	
1903.....	30.2	65	-11	1.70	1.05	1.56	2.49	2.3	5	16	7	8	
1904.....	32.9	75	-10	1.55	1.56	1.24	1.84	6.0	5	16	7	8	
1905.....	33.3	66	- 2	1.71	0.79	1.44	2.89	1.7	4	18	6	7	
1906.....	36.1	73	0	2.52	1.67	1.85	4.05	0.6	8	8	6	17	
1907.....	37.7	76	3	1.75	1.22	1.69	2.34	3.7	7	11	7	13	
1908.....	38.4	80	- 4	0.78	0.54	0.94	0.86	T.	3	16	7	8	
1909.....	24.9	76	-17	2.87	2.82	2.80	3.00	7.7	8	12	6	13	
1910.....	21.2	67	- 5	1.49	0.94	1.14	2.40	2.4	4	16	5	10	
1911.....	36.7	74	-11	2.85	2.74	2.56	3.26	5.1	7	13	6	12	
1912.....	36.5	72	- 2	0.62	0.54	0.49	0.82	0.6	3	19	5	7	
1913.....	38.3	74	- 3	2.26	2.11	2.84	1.83	6.6	7	9	4	18	
1914.....	26.8	68	-18	2.51	1.69	2.20	3.65	6.6	9	7	5	19	
1915.....	34.7	68	-13	2.99	1.48	2.45	5.03	7.8	6	12	6	13	
1916.....	31.3	82	-29	1.92	0.78	1.54	3.44	4.4	6	15	6	10	
1917.....	25.5	82	-23	0.76	0.41	0.75	1.13	7.3	5	11	7	13	
1918.....	40.0	83	-12	3.23	2.27	2.81	4.62	7.8	7	13	6	12	
1919.....	28.5	74	-22	0.72	0.41	0.66	1.08	0.7	3	12	4	15	
1920.....	35.6	77	-10	2.12	1.25	1.49	3.61	2.3	5	13	7	11	
1921.....	36.9	74	- 8	1.97	1.26	2.00	2.65	1.9	6	13	7	11	
1922.....	36.3	75	- 6	2.27	0.75	1.71	4.35	0.2	6	15	6	10	
1923.....	41.0	82	- 4	3.07	1.63	2.96	4.62	0.8	8	11	6	14	
1924.....	27.7	80	-28	3.48	2.94	3.45	4.06	4.6	7	13	6	12	
1925.....	31.6	69	-10	1.43	1.53	1.27	1.50	4.8	4	13	7	11	
1926.....	32.6	75	-12	2.16	1.17	2.12	3.20	2.4	6	11	5	15	
1927.....	29.9	74	-11	2.81	1.64	2.55	4.23	2.9	6	15	5	11	
1928.....	36.2	81	- 0	2.29	1.37	2.49	3.00	1.4	5	14	6	11	
1929.....	35.2	76	- 9	1.74	0.67	1.11	3.43	3.7	6	13	5	13	
1930.....	34.2	70	- 2	1.24	0.79	1.35	1.57	1.9	5	15	6	10	
1931.....	42.7	80	-11	2.71	2.53	1.51	4.10	1.7	8	11	6	14	
1932.....	31.2	77	-21	4.74	3.18	4.98	6.07	5.7	7	12	6	13	
1933.....	39.1	78	- 7	1.92	1.52	1.67	2.56	0.4	5	12	7	12	
1934.....	31.6	69	- 3	1.80	0.94	1.72	2.74	5.0	7	10	6	15	
1935.....	30.7	66	-11	1.20	0.85	1.03	1.73	2.8	6	11	7	13	
1936.....	38.4	69	- 7	2.83	2.19	2.71	3.60	2.2	7	12	7	12	
.....	..	....	.....	.....	.....	.....	.....	.....	..	..	..	..	
Period.....	34.1	83	-29	2.16	1.52	2.05	2.92	3.4	6	13	6	12	



## Climatological Data for December 1936

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches				Number of days				Prevailing direction of wind	Observers	
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelting	With precip., .01 inch or more	Clear	Partly cloudy			Cloudy
Northern Division																				
Bethany	Harrison	916	41	33.9	+ 3.8	60	25	- 2	7	29	1.06	-0.09	0.41	3.0	3	12	7	12	s.	A. S. Cumming
Brunswick	Chariton	652	55	35.8	+ 5.2	69	25	- 4	7	42	2.63	+0.96	1.15	2.0	7	14	3	14	sw.	O. K. Bevecke
Chillicothe	Livingston	779	27	32.8	.....	65	25	- 1	7	43	2.07	+0.65	.....	5.2	5	16	6	9	se.	Wm. J. Olenhouse
Clifton Hill	Randolph	731	37	35.8	+ 4.8	63	25	- 3	7	28	2.80	+1.08	1.10	2.8	5	11	11	9	sw.	Dr. A. J. Bradsher
Columbia	Boone	740	46	38.3	+ 5.1	65	25	- 8	7	35	2.44	+0.58	0.94	2.1	7	8	12	11	s.	U. S. Weather Bureau
Conception	Nodaway	980	47	33.2	+ 4.0	60	25	- 4	7	37	2.29	+1.41	1.39	4.0	5	5	11	15	ne.	Fr. Adelhelm Hess
Downing	Schuyler	876	15	35.3	+ 5.7	64	25	0	7	33	1.85	+0.39	0.53	3.5	4	16	3	12	s.	Everett Rowe
Edgerton	Platte	856	16	36.2	+ 5.8	63	25	4	6	34	2.00	+0.88	0.72	5.7	7	15	3	13	s.	Fred L. Stiff
Elsberry	Lincoln	449	5	36.1	.....	67	25	7	7	34	2.96	.....	1.25	3.3	8	11	7	13	s.	Ray E. Mills
Fayette	Howard	680	56	36.6	+ 5.6	65	25	5	7	31	3.10	+1.44	1.20	2.0	5	9	14	8	s.	Harry P. Mason
Fulton	Callaway	818	48	36.6	+ 3.1	65	25	7	7	42	2.59	+0.58	1.00	2.2	8	13	5	13	s.	Clyde C. Herring
Gorin	Scotland	700	49	.....	.....	.....	.....	.....	.....	.....	2.28	+0.88	0.86	1.0	5	18	5	8	nw.	W. L. Harker
Grant City	Worth	1,134	32	32.2	+ 4.2	59	25†	- 7	7	39	1.95	+0.89	0.80	4.3	5	10	6	15	se.	Howard Rybolt
Hannibal	Marion	759	44	36.0	+ 4.5	64	25	- 3	7	32	2.19	+0.65	0.71	1.1	6	11	7	13	se.	Hannibal Water Dept.
Kansas City	Jackson	741	47	38.8	+ 6.3	65	25	- 8	6	31	2.55	+1.02	0.94	4.2	7	8	15	sw.	U. S. Weather Bureau	
Kidder	Caldwell	1,020	44	31.8	+ 2.6	58	24†	- 1	7	42	2.02	+0.75	0.62	5.0	8	10	5	16	s.	Roscoe L. Terry
King City	Gentry	1,095	10	.....	.....	.....	.....	.....	.....	.....	1.60	+0.52	0.67	4.0	5	7	14	10	se.	John M. Martin
Kirkville	Adair	969	47	35.6	+ 6.0	63	25	- 3	7	30	2.17	+0.41	0.62	3.0	5	10	7	13	sw.	Charles Noble
Linneus	Linn	816	4	.....	.....	.....	.....	.....	.....	.....	1.92	.....	0.86	2.5	6	12	6	13	sw.	H. D. Taggart
Louisiana	Pike	469	42	36.2	+ 4.4	66	25	- 5	7	30	2.30	+0.40	1.00	2.0	6	17	5	9	s.	Stark Bro's Nurseries
Macon	Macon	875	37	31.6	+ 4.5	64	25	0	7	43	2.13	+0.49	0.81	1.0	6	14	7	10	w.	W. C. Brown
Maryville	Nodaway	1,169	46	32.7	+ 5.9	60	25	- 4	7	34	1.82	+0.74	0.75	6.5	6	8	7	16	s.	R. B. Montgomery
Mexico	Audrain	800	47	36.1	+ 4.3	66	25	- 5	7	43	3.11	+1.20	1.10	3.3	9	19	1	11	sw.	Mrs. Abbie Snoddy
Moberly	Randolph	875	0	35.6	.....	65	25	3	7	35	3.04	.....	1.40	4.0	5	13	8	10	sw.	J. W. Adams
Monroe City	Monroe	748	15	.....	.....	.....	.....	.....	.....	.....	2.51	+0.58	1.10	2.5	5	20	2	9	n.	J. S. Conway
Oregon	Holt	1,048	80	35.3	+ 6.6	64	25	0	6†	35	2.23	+1.19	0.92	3.5	4	13	9	9	se.	Miss Mina Wright
St. Charles	St. Charles	520	48	37.6	+ 2.7	68	25†	9	7	39	2.23	+0.44	0.75	4.0	6	17	5	9	nw.	Martin L. Comann
St. Joseph	Buchanan	957	26	36.2	+ 5.4	63	25	- 3	6	31	1.81	+0.84	0.83	3.8	7	11	7	13	s.	U. S. Weather Bureau
Shelbina	Shelby	779	43	.....	.....	.....	.....	.....	.....	.....	2.16	+0.62	0.70	3.0	5	.....	.....	.....	.....	J. C. Jewett
Steffenville	Lewis	650	38	35.4	+ 4.8	65	25	0	7	35	2.10	+0.41	1.10	1.0	5	10	9	12	s.	Frank Hall
Tarkio	Atchison	916	33	32.2	+ 5.8	61	25	- 2	6	30	1.40	+0.44	0.62	5.0	5	9	10	12	sw.	Albert Volker
Trenton	Grundy	822	40	34.5	+ 4.9	62	25	- 2	7	30	1.77	+0.36	0.80	4.1	7	8	10	13	s.	W. H. Estes
Unionville	Putnam	1,062	43	31.5	+ 3.9	60	25	- 5	7	43	1.69	-0.02	0.64	3.0	7	11	4	16	n.	John H. Schick
Warrenton	Warren	816	54	38.2	+ 5.8	66	25	- 7	7	29	4.01	+1.93	1.40	5.5	9	10	9	12	sw.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia	574	65	35.4	+ 5.8	64	25	- 1	7	33	2.81	+1.36	1.19	1.3	7	11	6	14	sw.	U. S. Weather Bureau
Division means and extremes				35.2	+ 4.9	69	25	- 7	7	43	2.19	+0.67	1.40	3.3	6	12	7	12	s.	
Southwestern Division																				
Appleton City	St. Clair	853	41	39.6	+ 5.0	62	24†	10	7	30	1.90	+0.31	0.95	2.1	6	18	2	11	ne.	Rolla Brown
Buffalo	Dallas	1,200	6	.....	.....	.....	.....	.....	.....	.....	1.95	.....	0.96	1.5	4	11	4	16	.....	C. M. McCallister
Caplinger Mills	Cedar	750	10	.....	.....	.....	.....	.....	.....	.....	3.20	+1.50	0.90	2.5	8	10	5	16	se.	Ozark Utilities Co.
Clinton	Henry	765	43	40.3†	+ 5.6	64	25	10	7	31	2.16	+0.29	0.70	1.5	6	7	13	11	sw.	A. E. Derwent, M. D.
Concordia	Lafayette	784	21	.....	.....	.....	.....	.....	.....	.....	2.72	+0.95	1.47	2.7	7	11	7	13	sw.	Miss Ora Stratman
Dean II	McDonald	1,000	32	43.2	+ 5.7	69	24	15	7	37	3.83	+1.48	1.55	T.	8	14	4	13	sw.	E. S. Taylor
Eldon	Miller	934	41	38.2 <sup>b</sup>	+ 3.9	63	24	9	7†	43	2.59	+0.83	0.92	2.0	9	9	12	10	s.	E. H. Shepherd
Garber	Taney	950	1	41.6	.....	68	28	13	7	39	2.82	.....	1.06	0.3	8	9	6	16	e.	William H. Durham
Hailey II	Barry	1,350	11	.....	.....	.....	.....	.....	.....	.....	3.28	+0.96	1.00	1.4	6	12	14	5	w.	A. W. Madison
Harrisonville	Cass	904	58	35.8	+ 4.5	65	24†	6	7	43	2.45	+1.00	1.00	1.0	6	11	8	12	sw.	John H. Patterson
Jefferson City	Cole	557	46	36.6	+ 3.7	65	24†	8	7	42	2.33	+0.39	0.96	5.0	8	11	10	10	e.	Mrs. Frank Kliegel
Lamar	Barton	980	48	40.4	+ 5.2	66	25	13	7	41	3.33	+1.45	1.35	2.5	7	13	7	11	se.	Jesse A. Mann
LaMonte	Pettis	867	35	38.0	+ 4.1	62	25	7	7	31	2.90	+1.15	1.00	2.2	6	10	9	12	nw	J. E. Wheeler
Lebanon	Laclede	1,265	48	40.0†	+ 5.2	.....	.....	.....	.....	.....	2.46	+0.18	0.90	1.5	6	14	8	9	e.	Mrs. Lou Mulcare
Lexington	Lafayette	688	51	36.4	+ 4.4	63	25	5	7	39	2.33	+0.74	0.77	4.2	6	14	13	4	s.	Miss Carrie Loomis
Lockwood	Dade	1,078	30	42.0	+ 5.9	67	29	12	7	30	2.55	+0.41	0.96	2.5	7	14	8	9	se.	Hubert A. Nieman
Marshall	Saline	779	49	39.0	+ 7.1	63	26	5	7	32	2.58	+0.83	0.88	3.5	5	18	6	7	se.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	35	40.7	+ 6.0	65	27†	11	7	27	2.13	-0.28	0.71	0.5	7	12	10	9	s.	Mo. Fruit Exp. Sta.
Neosho	Newton	1,011	49	43.3	+ 6.2	65	25	16	7	37	3.03	+0.75	1.02	T.	10	15	6	10	sw.	U. S. Fisheries Sta.
Nevada	Vernon	862	43	41.0	+ 5.7	66	25†	12	7	29	2.32	+0.57	0.60	2.5	7	13	8	10	sw	T. J. Kaupp
Seligman	Barry	1,542	35	42.6	+ 5.3	64	16†	13	7	35	2.31	+0.11	1.14	0	5	13 <sup>a</sup>	9 <sup>a</sup>	8	w.	Floyd E. Fawver
Seymour (near)	Webster	1,642	30	40.3	+ 4.9	61	25†	12	7	28	2.84	+0.58	0.86	2.0	6	14	4	13	se.	A. L. Hailey
Springfield	Greene	1,301	48	41.4	+ 5.2	63	25	14	7	32	2.60	+0.29	0.95	2.7	10	11	8	12	se.	U. S. Weather Bureau
Versailles	Morgan	1,037	4	39.6	.....	65	25	8	7	30	3.16	+1.29	1.03	2.9	8	12	8	11	sw.	I. M. Wilson
Warrensburg	Johnson	878	49	39.4	+ 6.0	63	25	7	7	30	2.08	+0.54	0.81	3.5	5	10	5	16	sw.	E. A. Markey
Warsaw	Benton	687	35	40.0	+ 4.3	64	25	9	7	34	2.86	+0.74	0.85	4.0	8	11	6	14	sw.	Everett Martin
Division means and extremes				40.0	+ 5.2	69	24	5	7	43	2.71	+0.66	1.60	2.1	7	12	8	11	sw.	
Southeastern Division																				
Arcadia	Iron	926	55	38.2	+ 3.9	63	25†	11	7†	43	3.24	+0.39	0.89	1.0	8	14	3	14	s.	Arcadia College
Birch Tree (near)	Shannon	1,000	41	41.0	+ 4.6	65	24	12	7	34	3.84	+1.09								



## Day of month

Continued on next page

## Daily Precipitation for December 1936—Continued from preceding page

Stations	Drainage-basins	Day of month																															Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Southeastern Div.—Continued																																		
Cape Girardeau	Mississippi	T.	.18			1.03	.12				.08								T.	.56								.69	.20	.03	.57	.49	3.95	
Carnthersville	do.	.10	.10			.08	1.00				.06									.10	.08							.10	.08		.08	1.21	2.91	
Centerville	Black	..	.52		..	..	.79											T.	.19						T.			.42			1.05	.60	3.57	
Crystal City	Mississippi	..	.09			.41					.03									.37								.28		.04	.82	.26	2.30	
Cuba	Meramec	..	..			1.02												..	..	..						..	..	.85			.60	..	2.47	
Dexter	St. Francis	..	.48			1.50	.38											T.	.86					T.				1.20		.05	.80	1.02	6.29	
Douglas	Black	.24			.92	.84					T.								.09	.04				T.				.52		T.	1.25		3.90	
Farmington	St. Francis	.08	.12		.60	.10					T.								.27	T.								.36	T.	T.	1.06		2.59	
Fisk	do.	.07	.33		.08	1.41	.26				.11								.17	.31				T.		T.		.16	.11	.14	1.14	.56	4.85	
Fredericktown	do.	T.	.38			1.04	.06													.25								.12	.20		.71	1.09	3.85	
Goodland	Black	.12			.40	.39													.70									.40			1.22		3.23	
Greenville	St. Francis	.42			.46	.98													.21												3.50		5.57	
Jackson	Mississippi	.07			.33	1.01					.08								.40									.80		.05	2.71		5.45	
Koshkoiung	Black	.38	.07		1.25	.41													.10									.95			.17	1.54	4.87	
Leeper	do.	.06	.31			1.22	.06				.01								T.	.09									.61	.03	T.	.70	1.70	4.79
Licking (near)	Gasconade	..	.14		.70														.15								..	.39			.65		2.03	
Marble Hill	Mississippi	.26			.32	.98					.05								.30	.06								.55			1.95		4.46	
Meramec Park	Meramec	..	.10			.72													.08	T.							T.	.56	T.		.13	.05	1.64	
Morehouse	Mississippi	.02	.09			.14	1.37	.01			.07								.14	T.								.84		.04	1.41		4.13	
New Madrid	do.	.01	.11			.41	.51				.12	.02							.01	.16	.01							.14	.22	.05	.10	.89	2.76	
Owensville	Gasconade	..	.07	.03		.71													.08	.21								.05	1.05	.35	T.	.18	.20	2.93
Parma	St. Francis	..	..			1.05	.76				.11								..	.14								.70	.10		.48	.35	3.69	
Poplar Bluff	Black	T.	.22			1.48	.17				.14								.11									.85			.12	.82	3.91	
Rolla	Meramec	..	.11		.06	.78					T.								.03	.17								.04	1.08	T.		.11	.10	2.48
St. Louis***	Mississippi	..	.04	T.		.39	T.				T.								.43									.01	.36	T.	.12	.73	2.06	
St. Louis University*	do.	..	.05	.01		.21					T.								.37									T.	.20		.12	.80	1.76	
Salem	Meramec	.11	T.			.43	.26				T.								.16									T.	.30		.64		1.90	
Sikeston	Mississippi	.30	.10		.08	.30	.95				.27								.30										.82		.35	.44	3.83	
Union	Meramec	..	.08			.58													.01	.10								T.	.68	.10	T.	.22	.35	2.12
Valley Park	do.	..	.10			.40					T.									.44								T.	.49	T.	T.	.17	.49	2.09
Williamsville	Black	..	.09	.25		1.40	.17				.07								.02	.13								.80		.03	1.10	1.11	5.17	
Willow Sprgs. (near)	White	..	.20	.09		1.12														.09									.59	.01		.55	.59	3.24
Zalma	Mississippi	..	..	.40		1.30														.40												.96	1.10	4.16
Cairo, Ill.***	do.	T.	.14	.02		.89	.40				.12								.21	T.						T.			.83	.01	.16	1.28		4.06

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. || Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. T. Trace, or less than 0.01 inch.  
 \*\*\* Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. \*\* Precipitation in the next following measurement; separate dates of fall not recorded. \* Precipitation is for 24-hour period, midnight to midnight † Estimated. ‡ Partially estimated. |||| Incomplete.

## Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for December 1936

(See precipitation data in table on preceding page)

Station	Data	Day of month																															Monthly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Lakeside (Osage Dam)	Evaporation	.055	.023	††††	.018	.058	.019	....	....	.157	††††	....	....	.097	....	.055	.051	.062	§§§§	....	.009	....	.059	.026	.022	.074	.123	.035	.044	.002	.034	....	0.995
	Mean temperature	31	34	40	36	38	26	25	34	42	29	32	35	38	40	43	44	37	32	34	36	36	38	46	46	48	56	51	45	50	55	40	39.2
	Wind movement	74	61	47	76	85	108	87	74	86	97	103	44	41	36	67	45	50	81	99	85	40	54	52	40	93	127	114	68	61	125	139	2,359

Observations taken at 7.30 a.m. Wind movement corrected to true velocities. For description see April 1932 report.

\*\*\*\* Evaporation included in next measurement. †††† — .015. †††† — .021. §§§§ — .024.



Daily Temperatures for December 1936

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Northern Division																																	
Brunswick §§	Maximum...	33	41	51	41	41	19	31	50	50	80	33	50	49	54	55	55	33	33	35	38	43	42	54	59	69	61	43	47	62	64	45	45.5
	Minimum...	23	21	21	24	24	19	4	8	25	24	14	14	23	24	29	29	32	30	26	22	21	21	25	35	38	53	41	30	32	46	28	26.0
Chillicothe §§	Maximum...	33	42	49	37	37	12	31	47	44	28	35	50	49	54	46	38	36	32	34	41	42	41	51	61	65	57	41	47	60	55	41	43.1
	Minimum...	20	17	20	19	22	4	1	4	25	21	10	13	24	25	29	28	27	25	17	18	19	21	24	36	37	39	33	27	29	45	25	22.6
Columbia	Maximum...	34	35	46	41	43	44	30	49	49	34	33	49	49	54	57	56	37	34	34	38	44	42	56	61	65	58	54	42	59	62	48	46.4
	Minimum...	24	28	31	28	32	9	8	27	34	24	17	27	30	33	31	35	34	29	22	28	24	28	41	40	53	51	34	33	42	30	29	30.2
Fayette	Maximum...	35	36	48	40	36	42	27	47	49	41	32	48	44	52	54	52	45	36	31	38	42	41	54	60	65	63	56	42	58	60	44	45.7
	Minimum...	22	21	32	24	30	11	5	25	32	24	13	18	23	25	25	35	32	29	20	25	19	25	35	35	47	50	37	32	40	32	25	27.4
Grant City	Maximum...	38	37	43	39	33	20	40	36	30	27	44	40	45	47	46	34	33	32	39	35	39	47	56	59	59	56	33	59	54	33	40.8	
	Minimum...	22	18	28	20	25	6	7	19	30	15	6	22	16	30	26	30	29	18	20	23	22	27	32	49	54	29	27	33	24	23	23.6	
Hannibal	Maximum...	32	39	44	39	33	40	25	46	48	43	29	47	46	53	54	53	42	34	38	42	41	39	51	59	64	59	54	36	47	60	43	44.5
	Minimum...	21	24	31	22	26	8	3	22	31	23	9	21	27	32	31	40	30	28	20	28	26	21	32	38	52	50	35	31	34	31	27	27.5
Kansas City	Maximum...	37	41	49	41	43	83	37	49	43	30	38	51	50	55	56	52	36	33	41	41	39	49	54	62	65	60	58	51	60	61	47	47.2
	Minimum...	27	24	29	28	32	8	8	33	29	17	16	31	25	36	35	32	32	28	21	27	25	29	42	41	53	57	33	33	51	30	32	30.4
Kldder §§	Maximum...	33	40	47	31	36	5	32	45	39	30	34	50	45	50	54	47	30	28	21	35	34	40	49	58	58	56	37	48	58	52	36	40.6
	Minimum...	20	19	21	20	22	3	1	3	25	20	9	13	23	24	29	29	28	26	15	14	19	25	26	35	37	50	30	27	29	45	24	22.9
Kirksville	Maximum...	34	40	49	42	33	35	24	45	44	...	37	49	48	52	52	51	39	35	42	45	41	41	49	54	63	61	54	36	58	58	42	45.1
	Minimum...	18	19	26	18	22	6	3	20	29	...	14	22	24	33	30	37	30	28	21	26	26	17	33	34	52	50	34	25	34	28	26	26.0
Louisiana	Maximum...	40	42	40	38	33	34	25	46	46	35	40	45	50	50	55	55	42	42	45	45	40	40	54	60	66	60	50	40	45	60	50	45.6
	Minimum...	18	20	80	20	30	13	5	22	30	25	12	20	20	25	27	34	33	30	20	27	20	15	32	34	42	50	40	30	35	45	28	26.8
Macon §§	Maximum...	33	42	48	38	37	15	30	48	50	27	33	50	49	53	54	55	37	35	40	44	44	44	56	60	64	59	40	40	60	59	44	45.0
	Minimum...	19	19	21	18	20	13	0	5	28	22	10	13	25	29	31	34	30	28	20	22	25	19	24	25	37	50	38	27	30	45	26	24.3
Maryville	Maximum...	35	40	46	32	33	32	24	42	35	28	31	44	41	48	49	44	84	32	30	39	36	40	48	56	60	59	55	34	58	54	32	41.0
	Minimum...	23	19	29	21	26	2	2	2	21	28	14	7	22	20	29	30	32	29	18	18	24	23	27	35	48	55	28	27	34	23	22	24.4
Mexico §§	Maximum...	34	40	45	40	46	32	27	50	49	35	35	49	50	56	55	60	40	36	40	40	42	42	55	60	66	58	56	43	60	61	48	46.8
	Minimum...	20	20	22	21	21	25	5	7	23	23	13	14	22	29	31	34	31	27	17	22	20	24	35	35	48	50	31	31	41	27	25.4	
Moberly	Maximum...	32	37	46	36	35	40	27	47	49	34	32	47	46	52	54	53	36	32	33	37	41	39	54	59	65	58	53	40	60	59	42	44.4
	Minimum...	21	20	32	21	27	5	3	24	34	20	12	20	24	30	29	36	31	28	20	23	22	22	35	35	49	50	34	29	35	29	28	26.7
Oregon	Maximum...	36	40	46	38	35	35	29	42	43	30	37	48	45	51	54	49	35	33	35	40	39	41	55	57	64	61	58	43	58	55	35	44.2
	Minimum...	21	23	30	22	27	0	0	27	29	15	11	23	24	31	33	33	30	28	20	22	26	24	33	39	49	55	28	28	41	22	23	26.4
St. Joseph	Maximum...	37	40	47	36	37	26	35	45	39	28	38	50	47	52	56	48	35	33	40	41	41	42	54	59	69	63	49	49	58	58	39	44.3
	Minimum...	25	23	31	26	26	3	4	32	25	14	13	30	26	36	35	32	31	29	23	26	26	27	35	41	51	41	30	32	48	25	27	28.2
Trenton	Maximum...	36	41	50	40	34	32	25	42	38	32	28	47	42	51	52	49	40	34	36	39	42	40	52	59	62	58	45	36	59	54	39	43.0
	Minimum...	21	17	31	20	27	2	2	22	31	20	9	21	24	32	28	34	28	29	24	25	24	22	36	35	51	45	32	28	36	27	26	26.0
Unionville §§	Maximum...	34	41	48	32	34	17	25	40	38	34	30	43	45	47	50	49	38	34	44	44	48	55	54	55	60	58	37	43	59	58	40	43.0
	Minimum...	19	19	18	18	17	11	5	3	23	20	6	9	12	23	29	32	28	28	21	20	20	35	34	25	27	22	10	25	25	28	25	20.0
Warrenton	Maximum...	37	33	41	49	35	43	27	50	54	49	33	48	51	55	57	59	54	35	34	41	43	41	55	61	66	60	57	41	52	62	48	47.5
	Minimum...	21	23	30	24	27	15	7	21	34	24	15	20	31	32	35	38	33	28	23	27	26	23	32	35	50	48	41	33	37	41	26	29.0
Southeastern Division																																	
Appleton City	Maximum...	38	38	51	48	42	45	40	50	50	43	38	49	51	54	57	57	45	35	37	42	45	54	57	62	62	60	57	56	57	59	50	49.3
	Minimum...	27	29	35	26	33	15	10	27	33	23	18	23	26	26	27	35	32	29	22	26	27	30	36	34	49	54	37	35	45	33	25	29.9
Clinton	Maximum...	39	38	48	48	40	43	36	48	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Minimum...	28	27	35	26	32	15	10	26	32	25	25	22	27	32	28	36	33	30	23	26	32	31	39	34	50	50						





## CLIMATOLOGICAL DATA

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## MISSOURI SECTION

ROSCOE NUNN  
ST. LOUIS, MO.

VOL. XL

ANNUAL SUMMARY 1936

No. 13

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR

## GENERAL SUMMARY

It was an outstanding year for long-continued periods of both cold and heat, and for the worst drought in the history of weather records in Missouri.

January opened with mild weather, but about January 18 a sharp change to colder occurred, which introduced one of the most protracted periods of severe cold of record. The last ten days of January will long be remembered for its sub-zero temperatures, with minimum readings as low as 25° below zero in the more northern portions of the State, 15° below in the southwestern counties, and 14° below in the southeast. As low as 5° below occurred along the southern border.

This spell of severe cold weather continued for a month and did not end until about February 20. February minimum readings were as low, or lower, than in January. However, there was no record-breaking extreme for any day; but the spell was record-breaking at some stations in point of long duration of very low temperature. At St. Louis the 30-day period, January 22-February 20, was decidedly the coldest 30-day period of record (years 1873-1936), with an average of 12.4°, whereas, the previous lowest 30-day average was 16.5° in 1918.

The 30-day period of severe cold brought the winter average (months of December, January, February) down so that this winter stands in the front line of extremely cold winters for the State as a whole. For low average temperature, the winters of 1904-05 and 1917-18 come first, each averaging 25.6°, and the winter of 1935-36 comes next, with an average of 26.1°. Other very cold winters were, 1892-93, with 26.6°, and 1898-99, with 26.4°.

From a February average of 23.2°, the March average jumped to 49.4°, the second mildest March of record. April was very cold the first week, but mostly moderate thereafter. However, killing frost occurred as late as April 23 in some localities.

May was the third warmest May of record and was the beginning of a five-month period of excessive warmth, except for brief interruptions, principally in June. The hot weather did not end until about the middle of September. October was almost normal in temperature. November was considerably colder than normal, but with many fine, clear days, and December averaged decidedly milder than usual.

The heat and drought of 1936, in comparison with previous such periods, are treated in a special article, page 39 of Climatological Data for August 1936, which shows that the 1936 spell was probably the most severe of record in Missouri, but only slightly more severe than the one of 1934, and that the 1901 spell ranks third. In 1936 the record for extreme maximum temperature for the State was broken, with 118° registered at Clinton and Lamar, but this was only 1° higher than in 1934. The hottest month, July, averaged hotter in the Northern Division than in the Southwestern and Southeastern.

Precipitation for the year, average for the State, was 29.42 inches, which is the second smallest annual amount in the last 49 years, or since State-wide records began. The year 1901, with 25.86 inches, was the driest of all. But for the three months period—June, July, August—the 1936 rainfall was the

least of record, with a total of only 3.78 inches, as compared with 8.01 inches in 1934 and 6.09 inches in 1901. The 1936 (Continued on page 65)

## CONDENSED STATE SUMMARY FOR 1936

Month	Temperature				Precipitation				
	Mean	Departure from Normal	Maximum	Minimum	Mean	Departure from Normal	Greatest	Least	No. Days with .01 or more
January	24.4	-6.4	74	-25	1.01	-1.30	3.61	0.05	7
February	23.2	-9.7	78	-25	1.50	-0.56	4.45	0.25	5
March	49.4	+5.6	84	13	1.27	-1.99	4.05	T	5
April	53.0	+2.2	95	9	2.45	-1.46	5.45	0.61	8
May	68.8	+4.4	95	32	2.52	-2.25	7.10	0.60	7
June	76.5	+2.9	112	40	1.42	-3.19	4.86	0.07	3
July	85.3	+7.3	118	44	1.52	-2.16	6.55	T	4
August	84.6	+8.2	116	43	0.84	-3.00	3.48	T	4
September	73.6	+4.4	109	37	3.62	+4.44	14.31	3.45	11
October	56.7	-0.7	89	20	3.55	+0.63	8.87	1.01	8
November	42.2	-2.2	79	0	1.89	-0.77	4.99	T	3
December	38.4	+4.3	69	-7	2.83	+0.67	6.29	1.06	7
Year	56.3	+1.3	118	-25	29.42	-10.95	14.31	T	73

## COMPARATIVE ANNUAL DATA FOR MISSOURI

Year	Temperature			Precipitation				Number of days				
	Average for State	Highest	Lowest	Average for State	Average Northern Division	Average Southwestern Division	Average Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy
1888.....	52.9	111	-32	40.40	39.67	41.36	40.17	.....	81	.....	.....	.....
1889.....	54.3	107	-9	38.19	36.97	40.35	37.26	.....	85	.....	.....	.....
1890.....	54.7	110	-19	39.51	31.07	42.08	45.39	.....	82	.....	.....	.....
1891.....	53.9	104	-13	37.18	37.28	37.71	36.54	.....	93	.....	.....	.....
1892.....	52.8	102	-31	41.77	41.62	47.88	44.80	.....	92	141	95	130
1893.....	52.7	107	-20	39.17	35.42	38.99	43.10	.....	77	155	117	93
1894.....	55.1	111	-35	34.61	26.97	38.27	38.58	15.4	73	170	120	75
1895.....	52.9	106	-26	40.03	36.74	43.42	39.92	23.7	85	161	108	96
1896.....	55.5	108	-10	40.37	39.65	39.79	41.68	12.6	86	154	111	101
1897.....	55.0	108	-16	40.56	35.18	37.46	49.03	19.5	86	167	104	94
1898.....	54.4	104	-20	54.26	51.87	51.12	55.80	18.6	102	162	102	101
1899.....	54.0	108	-32	37.93	36.74	36.81	40.64	28.8	82	166	110	89
1900.....	55.6	105	-16	39.00	35.73	39.57	41.70	18.5	90	171	106	88
1901.....	55.5	116	-29	25.86	23.36	26.56	27.66	19.2	72	190	98	77
1902.....	54.1	103	-17	45.01	42.71	48.98	43.33	16.7	103	159	103	103
1903.....	53.6	102	-25	40.63	38.78	42.79	40.31	16.5	96	170	96	99
1904.....	53.2	100	-23	42.06	41.59	42.43	42.16	18.8	89	180	99	87
1905.....	53.6	103	-40	47.00	39.82	51.84	49.35	22.3	97	174	91	100
1906.....	55.0	101	-13	35.43	30.26	38.78	49.25	28.2	98	165	89	111
1907.....	55.4	109	-15	40.91	37.01	41.92	43.81	12.8	95	173	82	110
1908.....	56.8	102	-10	43.81	37.66	47.24	46.54	9.7	91	184	92	90
1909.....	55.8	110	-20	45.27	44.94	42.95	47.32	18.3	92	173	90	102
1910.....	54.6	109	-24	37.81	31.96	37.99	43.48	17.2	82	183	81	101
1911.....	56.7	113	-19	37.43	38.04	37.92	36.33	15.2	88	166	86	113
1912.....	53.5	105	-36	38.99	32.53	38.82	45.62	39.6	81	192	80	94
1913.....	56.5	110	-12	38.20	33.14	35.96	45.50	26.0	87	174	80	111
1914.....	56.1	109	-18	34.68	32.21	36.43	35.41	26.4	81	171	86	108
1915.....	55.0	102	-24	49.84	48.57	51.71	49.22	25.3	98	160	86	119
1916.....	55.3	109	-29	40.62	38.58	41.08	42.19	18.2	87	191	77	98
1917.....	52.6	107	-23	32.21	28.70	31.92	36.01	13.9	80	186	83	96
1918.....	55.4	111	-25	37.69	32.60	37.19	43.29	27.2	84	185	80	100
1919.....	55.3	106	-23	40.27	36.73	40.46	43.62	10.2	86	181	81	103
1920.....	54.3	105	-10	37.56	33.62	38.66	40.40	15.4	89	171	82	113
1921.....	54.2	109	-8	44.70	39.16	46.40	48.54	11.1	92	173	93	99
1922.....	56.8	108	-6	39.68	37.50	41.64	39.90	8.2	85	192	80	93
1923.....	55.3	108	-11	42.18	33.43	42.47	50.64	8.6	98	165	88	112
1924.....	53.0	106	-28	40.03	35.28	44.39	40.41	28.3	92	173	91	102
1925.....	55.6	110	-15	39.15	38.83	36.81	41.82	16.4	84	171	94	100
1926.....	54.5	108	-20	42.92	42.35	43.85	42.57	23.2	95	160	86	119
1927.....	55.6	102	-24	55.53	42.03	59.85	64.70	13.4	101	163	91	111
1928.....	55.2	102	-18	45.88	41.22	46.01	50.40	6.8	90	174	94	98
1929.....	53.5	105	-23	46.72	44.13	45.56	50.48	22.3	102	155	93	117
1930.....	55.9	114	-31	31.38	26.71	34.90	32.53	17.6	75	194	84	87
1931.....	58.0	110	-5	40.31	41.10	38.85	40.97	14.2	93	175	82	108
1932.....	55.6	109	-21	38.24	35.88	36.74	42.09	16.0	85	178	93	95
1933.....	57.3	108	-22	37.62	29.65	37.05	46.16	8.0	86	175	95	95
1934.....	57.4	117	-26	35.08	30.66	34.92	39.66	23.0	82	187	89	89
1935.....	55.0	110	-12	48.04	42.33	49.12	52.66	5.0	106	144	89	132
1936.....	56.3	118	-25	29.42	26.48	30.03	31.73	15.8	73	196	86	84
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Period .....	55.0	118	-40	40.37	36.61	41.18	43.31	18.0	88	172	92	101



## Climatological Data for Year 1936

Stations	Counties	Elevation, feet	Temperature (Degrees Fahrenheit)					Precipitation (inches)					Number of days				Prevailing direction of wind			
			Length of record, years	Annual mean	Highest	Date	Lowest	Date	Length of record, years	Total	Greatest monthly	Month	Least monthly	Month	Total snowfall	With precip., .01 inch or more		Clear	Partly cloudy	Cloudy
Northern Division																				
Bethany	Harrison	916	42	53.1	111	Aug. 16	-25	Feb. 5	44	26.30	7.31	Sept.	0.29	July	31.8	69	219	88	59	sw.
Brunswick	Chariton	652	56	56.2	114	July 15	-20	Jan. 27	58	30.20	10.90	Sept.	0.14	June	26.0	90	203	61	102	se.
Chillicothe	Livingston	779	28	53.4	116	July 15	-21	Jan. 27†	31	27.45	9.02	Sept.	0.13	Aug.	35.0	70	232	63	71	sw.
Clifton Hill	Randolph	731	38	55.6	116	July 15	-20	Jan. 27	28	27.27	6.60	Sept.	0.69	Aug.	26.4	77	194	89	83	sw.
Columbia	Boone	740	47	56.0	111	July 15	-16	Jan. 27	47	26.84	10.21	Sept.	0.27	June	16.3	86	173	104	89	s.
Conception	Nodaway	980	48	52.9	110	Aug. 13	-25	Jan. 27	53	28.14	7.44	Sept.	0.31	Nov.	36.1	72	137	160	69	nw.
Downing	Schuyler	876	16	53.1	115	July 15	-20	Jan. 23	28	28.86	12.03	Sept.	0.03	July	31.7	78	225 <sup>b</sup>	61 <sup>b</sup>	78 <sup>b</sup>	s.
Edgerton	Platte	856	17	54.7	113	Aug. 14	-23	Jan. 27	26	26.04	8.12	Sept.	0.11	Aug.	20.6	79	261 <sup>c</sup>	21 <sup>c</sup>	81 <sup>c</sup>	s.
Elberry	Lincoln	449	6	54.8	110	July 14	-20	Jan. 28	6	27.25	8.87	Sept.	0.03	July	13.3	68	160 <sup>a</sup>	125 <sup>a</sup>	76 <sup>a</sup>	sw.
Fayette	Howard	680	57	55.5	116	July 15	-21	Jan. 27	54	26.20	6.45	Sept.	0.17	July	19.3	54	146	143	77	s.
Fulton	Callaway	818	49	55.3	113	July 15	-18	Jan. 27†	45	26.02	8.91	Sept.	0.08	June	16.6	85	205	63	98	s.
Gorin	Scotland	700	...	...	...	...	...	...	50	26.88	11.46	Sept.	0.11	July	41.0	71	225	87	54	nw.
Grant City	Worth	1,134	33	51.4	110	July 25†	-22	Jan. 25†	45	24.60	7.60	Sept.	0.32	Mar.	37.0	68	119	151	96	se.
Hannibal	Marion	759	45	54.8	109	July 15	-17	Jan. 23†	53	23.11	7.38	Sept.	0.58	Aug.	23.0	92	144	80	142	se.
Kansas City	Jackson	741	48	56.7	113	Aug. 14	-8	Jan. 27	48	21.51	7.99	Sept.	0.08	Mar.	16.9	84	157	109	160	sw.
Kidder	Caldwell	1,020	45	51.9	111	July 15†	-21	Jan. 27†	49	27.19	8.66	Sept.	0.21	Mar.	26.8	77	197	96	73	s.
King City	Gentry	1,095	...	...	...	...	...	...	11	29.96	9.75	Sept.	0.14	Nov.	45.3	70	89 <sup>1</sup>	194 <sup>1</sup>	74 <sup>1</sup>	nw.
Kirksville	Adair	969	48	53.8	113	July 15	-18	Jan. 23†	55	28.22	13.91	Sept.	0.32	July	34.3	63	188 <sup>b</sup>	93 <sup>b</sup>	83 <sup>b</sup>	sw.
Linneus	Linn	816	...	...	...	...	...	...	5	26.90	9.94	Sept.	0.28	Nov.	25.3	81	209	83	74	sw.
Louisiana	Pike	469	43	54.1	115	July 26†	-18	Jan. 28	56	27.40	10.17	Sept.	0.72	Jan.	11.3	57	224	78	64	s.
Macon	Macon	875	38	53.3	116	July 15	-19	Jan. 27	44	26.56	7.88	Sept.	0.50	Aug.	20.4	73	185	107	74	nw.
Maryville	Nodaway	1,169	47	51.9	110	July 25	-24	Jan. 27	43	26.36	6.89	Sept.	0.15	Mar.	47.1	83	180	72	114	nw.
Mexico	Audrain	800	48	54.2	113	July 15	-17	Jan. 27†	59	27.33	9.68	Sept.	0.54	June	18.2	88	237	24	105	w.
Monroe City	Monroe	748	...	...	...	...	...	...	16	23.79	5.52	Sept.	0.39	Aug.	16.9	59	221	75	70	s.
Oregon	Holt	1,048	81	54.0	112	Aug. 13	-19	Jan. 27	81	30.46	9.05	Sept.	0.14	Mar.	37.0	71	225	83	58	sw.
St. Charles	St. Charles	520	49	56.5	114	July 14	-15	Jan. 27	59	24.18	6.19	Sept.	0.19	July	16.9	79	232 <sup>a</sup>	71 <sup>a</sup>	82 <sup>a</sup>	se.
St. Joseph	Buchanan	957	27	54.6	110	Aug. 13	-17	Jan. 27	65	28.37	8.14	Sept.	0.04	Nov.	34.5	91	201	83	82	s.
Shelbina	Shelby	779	...	...	...	...	...	...	44	27.37	5.91	Sept.	0.32	Aug.	28.5	72	...	...	...	...
Steffenville	Lewis	650	39	54.2	115	July 15	-20	Jan. 27	44	30.91	12.12	Sept.	0.02	July	24.0	72	188	108	70	s.
Tarkio	Atchison	916	34	51.7	113	July 25	-22	Feb. 5	43	27.98	7.53	Sept.	T.	Mar.	54.0	64	191	86	89	sw.
Trenton	Grundy	822	41	54.5	114	July 15	-20	Feb. 5	42	22.98	8.77	Sept.	0.17	Aug.	33.3	69	184	128	54	s.
Unionville	Putnam	1,062	44	51.0	113	July 15	-19	Jan. 23†	44	24.97	10.26	Sept.	T.	Nov.	36.0	59	183	43	140	s.
Warrenton	Warren	816	55	56.7	111	July 14†	-16	Jan. 27	47	32.29	10.44	Sept.	0.07	July	20.5	76	133	153	80	sw.
Keokuk, Iowa	Lee, Iowa	574	65	53.5	113	July 15	-18	Jan. 22	65	24.06	7.59	Sept.	0.01	July	24.8	94	142	100	124	sw.
Division means and extremes		...	..	54.1	116	July 15	-25	Feb. 5†	..	26.48	13.91	Sept.	T.	Mar.†	27.8	76	190	92	84	s.
Southwestern Division																				
Appleton City	St. Clair	853	42	57.6	115	July 15	-8	Feb. 18	45	27.34	8.97	Sept.	T.	July	5.2	67	209 <sup>d</sup>	85 <sup>d</sup>	68 <sup>d</sup>	sw.
Buffalo	Dallas	1,200	...	...	...	...	...	...	6	30.10	10.12	Sept.	0.30	Jan.	4.3	56	229	58	79	...
Caplinger Mills	Cedar	750	...	...	...	...	...	...	10	28.46	9.37	Sept.	T.	July	5.2	51	226	44	96	se.
Clinton	Henry	765	44	58.2	118	July 15	-9	Feb. 18	50	27.35	10.47	Sept.	0.39	July	6.0	70	169	142	55	sw.
Concordia	Lafayette	784	...	...	...	...	...	...	21	26.72	8.69	Sept.	0.41	Mar.	14.6	62	216	54	96	sw.
Dean	McDonald	1,000	33	58.2	115	Aug. 9†	-9	Feb. 18	38	43.22	14.31	Sept.	0.07	Jan.	2.4	60	184	104	78	sw.
Eldon	Miller	934	42	55.5	113	July 15	-11	Jan. 28	38	29.87	11.02	Sept.	0.24	Jan.	11.5	77	138 <sup>b</sup>	147 <sup>b</sup>	65 <sup>b</sup>	sw.
Garber	Taney	950	2	58.2	112	July 18	-14	Feb. 18	2	32.15	10.15	Sept.	0.21	Jan.	1.8	68	133	93	140	e.
Hailey	Barry	1,350	...	...	...	...	...	...	12	31.95	8.60	Sept.	0.12	Jan.	1.4	53	195	80	91	se.
Harrisonville	Cass	904	59	54.2	111	July 15†	-10	Feb. 18†	62	24.91	9.64	Sept.	0.44	Mar.	7.0	66	186	81	99	sw.
Jefferson City	Cole	557	47	55.4	112	July 14	-13	Jan. 27	55	31.44	10.02	Sept.	0.20	June	16.9	76	200	97	69	s.
Lamar	Barton	980	49	58.0	118	July 18	-11	Feb. 18	56	29.42	7.81	Sept.	0.35	Jan.	4.7	54	229	63	74	sw.
LaMonte	Pettis	867	36	56.2	114	July 15	-15	Jan. 27	51	29.11	9.98	S-pt.	0.60	June	11.1	74	194	100	72	s.
Lebanon	Laclede	1,265	49	56.0	110	July 14	-11	Feb. 18	50	33.68	9.90	Sept.	0.25	Jan.	4.7	54	226 <sup>b</sup>	63 <sup>b</sup>	75 <sup>b</sup>	sw.
Lexington	Lafayette	688	52	55.7	113	July 15	-13	Jan. 27	53	30.76	9.25	Sept.	0.11	June	22.2	87	238	91	37	sw.
Lockwood	Dade	1,078	31	59.1	114	July 18	-10	Feb. 18	41	35.83	11.94	Sept.	0.52	Jan.	5.8	63	237	64	65	sw.
Marshall	Saline	779	50	56.3	112	July 15	-15	Jan. 27	47	24.77	6.79	Sept.	0.15	June	23.5	65	240	72	54	sw.
Mountain Grove	Wright	1,463	36	57.2	109	July 15	-10	Feb. 18	40	30.99	7.45	Sept.	0.47	Aug.	12.0	73	209	99	58	s.
Neosho	Newton	1,011	50	58.6	110	July 18†	-11	Feb. 18	54	32.05	9.01	Sept.	0.24	Jan.	0.8	70	239	66	61	sw.
Nevada	Vernon	862	44	59.0	117	July 18	-8	Feb. 18	45	29.15	9.17	Sept.	0.27	Aug.	3.3	48	204	79	83	sw.
Seligman	Barry	1,542	36	58.7	110	Aug. 9	-11	Feb. 18	34	28.04	10.54	Sept.	0.05	Jan.	2.0	56	226 <sup>1</sup>	61 <sup>1</sup>	77 <sup>1</sup>	w.
Seymour (near)	Webster	1,642	30	56.2	105	July 15	-9	Feb. 18	31	27.37	5.78	Sept.	0.34	Jan.	7.2	63	206	74	86	s.
Springfield	Greene	1,301	49	57.6	106	July 15†	-8	Feb. 18	49	27.69	7.29	Sept.	0.17	Jan.	5.9	95	197	95	74	s.
Versailles	Morgan	1,037	10	57.6	114	July 15	-13	Jan. 27†	57	28.48	11.99	Sept.	0.12	July	10.8	81	193 <sup>a</sup>	76 <sup>a</sup>	96 <sup>a</sup>	sw.
Warrensburg	Johnson	878	50	56.9	114	July 15	-12	Jan. 27†	57	24.55	8.94	Sept.	0.17	Mar.	11.1	62	216 <sup>a</sup>	50 <sup>a</sup>	99 <sup>a</sup>	sw.
Warsaw	Benton	687	36	58.2	113	July 15†	-10	Jan. 30	42	30.37										



Monthly and Annual Mean Temperatures for the Year 1936, with Departures from Normal

Stations	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure
Northern Division																										
Bethany.....	14.6	-10.2	13.0	-14.5	45.6	+ 5.3	51.2	- 0.3	66.6	+ 4.1	72.6	+ 0.6	85.4	+ 9.1	84.7	+ 9.7	73.0	+ 5.9	55.5	+ 0.7	40.8	- 2.0	33.9	+ 3.8	53.1	+ 1.0
Brunswick.....	21.2	- 5.5	19.4	-10.4	45.0	+ 8.2	54.5	+ 0.3	70.2	+ 6.0	77.6	+ 4.6	87.2	+11.1	86.4	+12.2	74.4	+ 7.4	57.6	+ 2.3	40.2	- 1.4	35.8	+ 5.2	56.2	+ 3.3
Chillicothe.....	16.0	-10.8	13.4	-18.6	46.2	+ 5.1	51.3	- 1.8	67.8	+ 2.6	75.6	+ 2.7	86.3	+ 7.4	85.8	+10.1	72.2	+ 3.6	55.0	+ 1.8	38.6	- 3.1	32.8	+ 2.9	53.4	- 0.1
Clifton Hill.....	20.6	- 7.5	18.4	-11.8	48.4	+ 6.2	52.6	- 0.9	69.0	+ 5.4	76.8	+ 4.4	87.5	+11.1	86.2	+10.2	74.4	+ 5.8	57.0	+ 0.3	41.1	- 2.5	35.8	+ 4.8	55.6	+ 2.1
Columbia.....	22.8	- 6.4	21.4	-10.4	48.2	+ 5.6	53.0	- 1.9	69.7	+ 5.4	76.3	+ 3.5	86.6	+ 9.7	85.1	+ 9.5	72.9	+ 4.7	56.5	+ 0.1	40.8	- 2.5	38.3	+ 5.1	56.0	+ 1.9
Conception.....	12.6	-12.1	11.4	-16.8	45.7	+ 4.5	50.8	- 1.4	67.6	+ 5.5	75.0	+ 3.5	87.0	+10.4	84.4	+ 9.7	71.8	+ 4.6	55.4	+ 0.0	39.8	- 1.6	33.2	+ 4.0	52.9	+ 1.0
Downing.....	16.4	- 9.0	14.4	-17.9	44.2	+ 4.3	52.0 <sup>a</sup>	- 1.8	67.8 <sup>a</sup>	+ 4.8	76.0 <sup>a</sup>	+ 4.1	85.6 <sup>a</sup>	+ 9.5	85.7	+10.6	73.1	+ 5.2	57.0 <sup>a</sup>	+ 0.7	41.4 <sup>a</sup>	- 0.4	36.2	+ 5.8	54.7	+ 1.3
Edgerton.....	16.6 <sup>a</sup>	-10.3	17.4	-16.9	47.5	+ 4.3	52.0 <sup>a</sup>	- 1.8	67.8 <sup>a</sup>	+ 4.8	76.0 <sup>a</sup>	+ 4.1	85.6 <sup>a</sup>	+ 9.5	85.7	+10.6	73.1	+ 5.2	57.0 <sup>a</sup>	+ 0.7	41.4 <sup>a</sup>	- 0.4	36.2	+ 5.8	54.7	+ 1.3
Elsberry.....	23.0	- 21.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fayette.....	21.6	- 5.4	20.1	-10.5	48.2	+ 6.3	53.1	- 1.1	69.0	+ 5.2	76.2	+ 3.4	85.8	+ 8.6	83.9	+ 8.0	73.9	+ 5.8	56.5	+ 0.1	40.7	- 1.5	36.6	+ 5.5	55.5	+ 2.0
Fulton.....	22.2	- 7.3	19.2	-13.9	47.6	+ 3.5	51.6	- 3.0	69.1	+ 4.5	76.0	+ 2.8	85.8	+ 8.1	84.6	+ 8.2	72.6	+ 3.7	56.7	+ 0.7	41.2	- 3.0	36.6	+ 3.1	55.3	+ 0.5
Grant City.....	12.5	-12.3	10.6	-18.0	43.6	+ 2.9	49.4	- 2.8	66.6	+ 4.6	72.0	+ 1.2	85.0	+ 8.8	83.0	+ 8.1	70.5	+ 3.5	52.5	+ 2.6	39.0	- 2.9	32.2	+ 4.2	51.4	+ 0.5
Hannibal.....	19.7	- 7.4	18.8	-10.9	46.5	+ 5.5	51.0	- 0.5	70.9	+ 6.1	78.4	+ 4.8	87.1	+ 9.7	87.0	+10.4	73.6	+ 4.7	57.2	+ 0.5	42.4	- 1.3	38.8	+ 6.3	56.7	+ 2.3
Kansas City.....	21.7	- 6.5	19.6	-11.6	48.9	+ 6.2	54.3	- 0.5	70.9	+ 6.1	78.4	+ 4.8	87.1	+ 9.7	87.0	+10.4	73.6	+ 4.7	57.2	+ 0.5	42.4	- 1.3	38.8	+ 6.3	56.7	+ 2.3
Kidder.....	13.4	-12.6	11.1	-17.3	43.6	+ 2.8	50.6	- 1.6	66.6	+ 4.0	74.1	+ 2.3	85.5	+ 9.0	84.9	+ 9.5	71.6	+ 4.3	52.4	+ 3.4	37.0	- 0.1	35.6	+ 6.0	53.8	+ 0.4
Kirksville.....	18.0	- 6.8	15.5	-11.6	45.6	+ 5.9	50.9	- 1.0	68.2	+ 5.9	73.8	+ 2.1	85.8	+ 9.8	84.2	+10.2	71.7	+ 5.1	55.4 <sup>a</sup>	+ 0.7	40.5	- 0.1	35.6	+ 6.0	53.8	+ 0.4
Louisiana.....	21.2	- 6.9	19.2	-11.7	45.3	+ 1.8	49.8	- 3.3	68.2	+ 4.5	75.4	+ 3.8	86.0	+ 9.6	82.6	+ 7.7	72.2	+ 4.2	55.8	+ 0.4	39.3	- 4.4	36.2	+ 4.5	53.3	+ 0.1
Macon.....	17.4	-10.1	14.6	-15.0	44.6	+ 2.4	49.8	- 3.3	68.2	+ 4.5	75.4	+ 3.8	86.0	+ 9.6	82.6	+ 7.7	72.2	+ 4.2	55.8	+ 0.4	39.3	- 4.4	36.2	+ 4.5	53.3	+ 0.1
Maryville.....	12.1	-10.8	11.0	-14.4	44.6	+ 6.7	49.9	- 3.0	67.3	+ 4.6	75.0	+ 1.8	86.4	+ 9.1	85.2	+ 9.2	72.0	+ 3.5	54.1	+ 0.2	40.2	- 2.7	36.2	+ 5.9	51.9	+ 1.7
Mexico.....	19.8	- 8.2	17.6	-12.5	45.4	+ 3.4	50.2	- 3.6	68.8	+ 4.8	75.0	+ 1.8	86.4	+ 9.1	85.2	+ 9.2	72.0	+ 3.5	54.1	+ 0.2	40.2	- 2.7	36.2	+ 5.9	51.9	+ 1.7
Moberly.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oregon.....	15.4	- 8.7	14.6	-14.2	47.0	+ 7.1	52.4	- 0.3	68.6	+ 5.4	74.9	+ 2.7	86.8	+11.2	85.9	+ 9.9	71.5	+ 4.4	55.3	+ 0.2	41.2	- 0.7	35.3	+ 6.6	54.0	+ 2.1
St. Charles.....	22.4	- 8.6	22.3	-10.0	48.5	+ 4.0	51.6	- 4.0	71.0	+ 7.9	76.4	+ 2.5	87.8	+ 9.7	86.0	+ 9.2	74.6	+ 6.3	58.0	+ 0.2	41.6	- 3.7	37.6	+ 2.7	56.5	+ 0.2
St. Joseph.....	16.8	-11.1	15.6	-16.8	47.0	+ 4.6	52.7	- 2.5	68.4	+ 4.6	74.5	+ 1.9	86.5	+ 8.7	84.2	+ 7.7	72.1	+ 3.1	56.2	+ 1.2	41.0	- 2.5	35.4	+ 5.4	54.6	+ 0.3
Steffenville.....	18.6	- 8.8	17.6	-12.1	45.8	+ 3.6	50.6	- 2.0	66.7	+ 4.1	73.4	+ 1.6	85.5	+ 8.7	82.5	+ 7.3	69.3	+ 3.0	54.2	+ 0.6	38.6	- 1.5	32.2	+ 4.8	54.2	+ 0.6
Tarkio.....	12.2	-10.7	10.8	-18.2	44.6	+ 4.5	50.2	- 2.0	66.7	+ 4.1	73.4	+ 1.6	85.5	+ 8.7	82.5	+ 7.3	69.3	+ 3.0	54.2	+ 0.6	38.6	- 1.5	32.2	+ 4.8	54.2	+ 0.6
Trenton.....	16.6	- 9.7	15.2	-14.2	47.0	+ 5.9	52.6	- 0.1	68.7	+ 5.2	76.0	+ 3.8	87.0	+11.0	85.4	+10.2	73.5	+ 6.3	55.4	+ 0.5	41.2	- 1.0	34.5	+ 4.9	54.5	+ 1.2
Unionville.....	12.6	-10.9	9.6	-17.1	41.5	+ 2.6	47.8	- 3.2	67.6	+ 5.5	73.1	+ 1.8	86.0	+ 9.5	83.4	+ 8.6	69.8	+ 2.7	52.4	+ 2.8	36.6	- 1.0	31.5	+ 3.9	51.0	- 0.3
Warrenton.....	24.3	- 4.9	23.0	- 7.9	49.6	+ 7.1	52.6	- 2.7	68.7	+ 4.9	74.0	+ 1.5	87.4	+10.1	83.9	+ 8.4	74.0	+ 4.1	56.0	+ 0.6	39.3	- 1.8	35.4	+ 5.8	53.5	+ 1.3
Keokuk, Iowa.....	17.2	- 7.7	15.9	-12.5	43.8	+ 4.9	49.6	- 2.7	68.7	+ 4.9	74.0	+ 1.5	87.4	+10.1	83.9	+ 8.4	74.0	+ 4.1	56.0	+ 0.6	39.3	- 1.8	35.4	+ 5.8	53.5	+ 1.3
Division means.....	17.9	- 8.8	16.3	-13.9	46.3	+ 4.8	51.2	- 2.0	68.4	+ 5.0	75.0	+ 2.7	86.4	+ 9.5	84.6	+ 9.2	72.3	+ 4.6	55.6	- 0.4	40.2	- 2.0	35.2	+ 4.9	54.1	+ 1.1
Southwestern Division																										
Appleton City.....	26.8	- 4.5	24.4	- 9.5	50.0	+ 4.9	55.3 <sup>a</sup>	- 0.8	70.1	+ 5.1	78.0 <sup>a</sup>	+ 3.6	86.4	+ 8.2	86.6	+ 8.8	74.6	+ 4.2	56.7	- 2.2	42.6	- 3.4	39.6	+ 5.0	57.6	+ 1.6
Clinton.....	25.7	- 6.0	23.4	-10.2	51.4	+ 6.4	56.0	- 0.3	70.6	+ 5.1	79.2	+ 5.4	88.4	+10.1	88.6	+11.0	74.8	+ 4.0	57.4	- 1.5	42.6	- 4.1	40.3 <sup>b</sup>	+ 5.6	58.2	+ 2.1
Deau.....	30.0	- 5.9	28.8	- 6.5	50.4	+ 1.6	54.0	- 2.7	67.0	+ 1.3	77.2	+ 4.5	84.0	+ 6.7	85.6 <sup>a</sup>	+ 7.9	76.8	+ 5.8	57.7	- 1.0	44.2	- 5.1	43.2	+ 5.7	58.2	+ 1.0
Eldon.....	23.6	- 7.5	21.0	-12.1	48.0	+ 4.4	51.8	- 3.6	68.8	+ 4.6	76.1 <sup>b</sup>	+ 3.1	86.2	+ 9.0	85.6 <sup>a</sup>	+ 9.2	71.2	+ 1.8	54.3	- 3.1	41.3	- 5.3	38.2 <sup>b</sup>	+ 3.9	55.5	+ 0.5
Garber.....	31.1	- 30.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Harrisonville.....	20.4	- 6.9	16.6	-14.1	47.2	+ 5.9	51.0	- 2.9	67.8	+ 4.0	75.5	+ 2.5	85.8	+ 8.1	85.0	+ 9.1	71.2	+ 2.7	54.0	- 2.1	40.0	- 2.5	35.8	+ 4.5	54.2	+ 0.7
Jefferson City.....	23.4	- 6.4	20.8	-11.3	48.0	+ 4.4	51.6	- 4.4	69.2	+ 4.5	77.0	+ 3.2	86.7	+ 8.6	84.5	+ 7.8	71.5	+ 2.2	55.6	- 1.2	40.4	- 3.7	36.6	+ 3.7	55.4	+ 0.6
Lamar.....	28.2	- 3.9	25.4	- 9.0	50.8	+ 4.8	55.1	- 1.5	69.5	+ 3.9	78.5	+ 4.3	86.3	+ 7.9	86.0	+ 8.3	75.4	+ 4.6	56.5	- 2.4	43.4	- 2.9	40.4	+ 5.2	58.0	+ 1.5
LaMonte.....	24.2	- 4.7	22.2	-11.0	49.2	+ 5.2	52.4	- 2.8	68.6	+ 4.0	77.0	+ 3.0	85.8	+ 7.6	85.0	+ 7.9	73.2	+ 3.0	56.2	- 1.8	42.4	- 2.0	38.0	+ 4.1	56.2	+ 1.0
Lebanon.....	26.4	- 6.1	24.2	-10.2	48.0	+ 3.0	52.0	- 3.5	66.7	+ 1.8	76.6	+ 3.9	84.1 <sup>a</sup>	+ 7.5	84.0	+ 7.9	72.8	+ 3.4	56.2	- 1.5	41.2	- 4.4	40.0 <sup>a</sup>	+ 5.2	56.0	+ 0.6
Lexington.....	20.3	- 7.5	17.4	-13.6	47.5	+ 4.1	52.8	- 1.8	70.6	+ 5.9																



## Monthly and Annual Precipitation for the Year 1936, with Departures from Normal

Stations	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure
Northern Division																										
Amity	2.03	.....	0.47	.....	0.35	.....	3.77	.....	5.21	.....	1.46	.....	1.66	.....	0.90	.....	6.81	.....	1.70	.....	0.18	.....	2.32	.....	26.86	.....
Bethany	2.67	+1.48	0.45	-0.97	0.30	-1.93	2.09	-1.20	4.76	+0.59	1.98	-3.08	0.29	-3.87	1.88	-1.94	7.31	+2.75	2.89	-0.03	0.62	-1.42	1.06	-0.09	26.30	-9.71
Bowling Green	0.96	.....	1.25	.....	1.14	.....	1.01	.....	2.62	.....	0.70	.....	1.00	.....	0.43	.....	9.68	.....	2.72	.....	1.75	.....	2.28	.....	25.64	.....
Brunswick	1.61	+0.02	3.76	+1.95	0.55	-2.15	2.89	-0.94	2.12	-2.49	0.14	-4.97	1.63	-2.48	0.61	-3.33	10.90	+6.09	2.48	-0.52	0.88	-1.31	2.63	+0.96	30.20	-9.17
Canton	1.48	.....	1.99	.....	1.01	.....	1.96	.....	2.14	.....	2.31	.....	0.78	.....	0.53	.....	8.89	.....	1.16	.....	0.88	.....	1.80	.....	24.93	.....
Chillicothe	1.96	+0.48	1.11	-0.34	0.39	-2.09	3.28	+0.06	2.59	-1.50	1.29	-3.44	0.76	-2.66	0.13	-3.83	9.02	+4.24	4.50	+1.36	0.35	-1.77	2.07	+0.65	27.45	-8.84
Clifton Hill	1.75	+0.03	3.85	+2.11	0.86	-1.88	2.27	-1.09	2.41	-1.99	1.03	-3.36	1.39	-1.97	0.69	-3.11	6.60	+2.06	2.52	0.00	1.10	-0.88	2.80	+1.08	27.27	-9.00
Columbia	0.93	-0.99	1.40	-0.69	2.20	-0.74	0.63	-3.14	2.88	-1.58	0.27	-4.49	0.97	-2.52	1.34	-2.26	10.21	+5.86	2.09	-0.52	1.48	-0.72	2.44	+0.58	26.84	-11.21
Conception	2.67	+1.88	1.03	-0.12	0.38	-1.27	2.35	-0.38	4.98	+0.92	1.41	-3.54	0.88	-3.79	2.01	-1.63	7.44	+2.80	2.39	-0.49	0.31	-1.43	2.29	+1.41	28.14	-5.64
Dowling	1.81	+0.49	0.93	-0.45	0.75	-1.41	2.05	-1.83	2.05	-3.11	2.02	-3.17	0.03	-3.78	1.13	-2.51	12.03	+6.84	2.59	-0.47	1.02	-0.96	1.85	+0.39	28.26	-9.97
Edgerton	1.79	+0.94	0.54	-0.80	0.16	-2.10	3.51	+0.43	4.41	+0.21	1.38	-3.49	0.87	-2.63	0.11	-3.93	8.12	+3.53	2.89	+0.27	0.26	-1.71	2.00	+0.88	26.04	-8.40
Edina	2.40	.....	1.74	.....	0.80	.....	1.73	.....	1.53	.....	1.16	.....	0.89	.....	0.45	.....	11.21	.....	1.37	.....	0.81	.....	1.76	.....	25.85	.....
Elberly	1.21	.....	1.27	.....	1.22	.....	0.94	.....	2.60	.....	1.55	.....	0.03	.....	0.09	.....	8.87	.....	3.28	.....	3.23	.....	2.96	.....	27.25	.....
Farber	1.13	.....	1.05	.....	1.23	.....	1.29	.....	1.96	.....	0.66	.....	0.15	.....	0.22	.....	8.69	.....	2.02	.....	1.75	.....	2.22	.....	22.37	.....
Fayette	1.36	-0.43	1.61	-0.09	1.59	-1.23	1.15	-2.40	3.77	-0.55	0.66	-3.91	0.17	-3.08	2.78	-0.78	6.45	+1.49	2.09	-0.80	1.47	-0.63	3.10	+1.44	26.20	-10.97
Fulton	0.99	-1.03	1.01	-0.66	0.85	-2.11	0.85	-3.16	3.05	-1.55	0.08	-4.32	0.58	-2.71	1.47	-2.18	8.91	+4.42	3.09	-0.33	2.55	+0.24	2.59	+0.58	26.02	-12.81
Gallatin	2.04	+0.82	0.47	-1.12	0.60	-1.72	4.82	+1.26	5.12	+0.40	1.58	-3.48	1.46	-2.66	0.16	-3.64	7.97	+2.77	3.62	+0.44	0.37	-1.71	1.68	+0.40	29.89	-8.24
Gorin	2.01	+0.63	1.80	+0.40	0.87	-1.35	1.98	-1.43	1.43	-3.14	1.82	-2.85	0.11	-3.50	0.50	-2.96	11.46	+6.79	1.61	-1.37	1.01	-1.02	2.28	+0.88	26.88	-8.92
Grant City	2.52	+1.55	0.43	-0.68	0.32	-1.69	1.25	-1.71	2.82	-1.41	1.61	-3.39	0.36	-4.27	1.54	-2.40	7.60	+2.91	3.84	+0.80	0.36	-1.49	1.95	+0.89	24.00	-10.89
Hannibal	1.18	-0.54	1.95	+0.09	0.83	-1.77	1.17	-2.02	1.86	-2.49	0.84	-3.06	1.05	-2.04	0.58	-2.76	7.38	+3.41	2.00	-0.39	0.48	+0.02	1.99	+0.65	23.11	-10.90
Hermann	0.72	-1.21	1.22	-0.43	1.03	-1.80	1.46	-2.57	2.45	-1.72	0.16	-4.21	0.30	-3.04	1.37	-2.30	8.05	+3.67	3.73	+0.10	3.90	+1.43	2.48	+0.67	26.87	-11.41
Kahoka	2.14	.....	1.60	.....	1.33	.....	2.21	.....	1.65	.....	1.32	.....	T	.....	0.65	.....	11	.....	2.88	.....	1.48	.....	2.25	.....	27.59	.....
Kansas City	1.17	-0.02	0.55	-1.27	0.08	-2.45	1.89	-1.25	4.16	-0.49	0.51	-4.48	0.36	-3.77	0.25	-3.84	7.99	+3.43	2.01	-0.91	0.19	-1.64	2.35	+1.02	21.51	-15.67
Kidder	1.92	+0.70	0.26	-1.28	0.21	-1.98	2.92	-0.36	4.89	+0.24	1.64	-3.33	0.96	-2.92	0.29	-3.67	8.66	+3.46	3.12	+0.05	0.30	-1.85	2.02	+0.75	27.19	-10.19
King City	3.61	+2.47	0.43	-1.07	0.26	-1.80	3.63	+0.33	4.93	+0.72	1.21	-4.10	0.76	-2.78	1.14	-2.54	9.75	+4.33	2.50	-0.40	1.14	-1.82	1.60	+0.52	29.96	-6.14
Kirkville	1.50	-0.02	1.41	-0.12	0.71	-2.23	1.58	-2.52	2.60	-2.73	0.94	-4.12	0.32	-3.98	0.74	-3.88	13.91	+8.73	1.41	-0.75	0.93	-1.19	2.17	+0.41	28.22	-12.90
La Belle	1.38	.....	2.10	.....	1.06	.....	2.00	.....	2.51	.....	2.00	.....	0.20	.....	0.52	.....	9.24	.....	2.15	.....	0.91	.....	1.67	.....	25.74	.....
Linneus	1.68	.....	1.12	.....	0.65	.....	2.82	.....	2.02	.....	0.92	.....	2.01	.....	0.33	.....	9.94	.....	3.21	.....	0.28	.....	1.92	.....	26.90	.....
Louisiana	0.72	-1.43	0.95	-1.13	1.05	-2.42	1.37	-2.35	3.45	-1.25	2.45	-1.78	0.85	-2.75	0.70	-3.78	10.17	+5.74	1.55	-1.73	1.78	-0.68	2.30	+0.40	27.40	-13.16
Lucerne	1.58	+0.56	0.25	-0.95	0.50	-1.55	1.06	-2.50	3.00	-1.73	2.53	-3.11	0.28	-2.78	1.26	-3.18	9.01	+3.35	1.71	-1.82	0.42	-1.86	1.60	-0.01	23.20	-15.58
Nacoe	1.30	-0.40	2.07	+0.37	0.73	-2.11	1.69	-1.97	3.33	-1.26	1.57	-3.15	2.61	-0.80	0.50	-3.31	7.88	+3.44	1.83	-1.06	0.92	-1.27	2.13	+0.49	26.56	-11.03
Madison	1.65	.....	2.60	.....	0.98	.....	1.86	.....	2.29	.....	0.24	.....	1.90	.....	1.54	.....	7.72	.....	2.53	.....	1.44	.....	1.93	.....	26.68	.....
Maryville	2.76	+1.76	0.61	-0.82	0.15	-1.72	2.67	-0.34	5.07	+0.42	1.32	-3.79	0.37	-4.86	2.07	-1.91	6.89	+2.21	2.45	-0.52	0.18	-1.74	1.82	+0.74	26.36	-10.57
Memphis	1.60	.....	1.23	.....	0.78	.....	2.88	.....	1.72	.....	1.75	.....	T	.....	1.35	.....	13.45	.....	1.01	.....	1.11	.....	1.69	.....	28.57	.....
Mexcio	0.91	-1.12	1.07	-0.78	1.69	-1.22	1.16	-2.59	2.37	-2.23	0.54	-4.20	0.99	-2.22	0.96	-2.89	9.68	+4.71	3.37	+0.30	1.48	-0.75	3.11	+1.20	27.33	-11.79
Milan	2.06	+0.89	1.03	-0.35	0.71	-1.54	2.20	-1.77	2.75	-2.07	1.56	-3.54	0.64	-2.44	0.51	-3.73	9.74	+4.20	2.47	-1.50	0.46	-1.72	2.24	+0.43	26.37	-13.14
Moberly	1.09	-0.82	1.93	+0.52	1.08	-1.81	1.04	-2.63	2.83	-1.57	2.13	-2.95	0.96	-2.70	0.39	-3.93	5.52	+0.70	2.63	+0.03	1.68	-0.64	2.51	+0.58	23.79	-15.22
Monroe City	1.31	.....	1.70	.....	1.46	.....	1.25	.....	3.24	.....	1.39	.....	0.27	.....	0.64	.....	8.55	.....	1.89	.....	1.63	.....	2.43	.....	25.76	.....
New London	2.79	+1.86	0.45	-0.92	0.14	-1.82	2.47	-0.82	7.10	+2.57	1.75	-3.62	0.53	-3.65	1.73	-2.07	9.05	+3.95	2.08	-0.72	0.19	-1.79	2.23	+1.19	30.46	-5.84
Oregon	0.81	-1.19	1.81	+0.07	0.77	-1.91	1.81	-1.92	2.51	-1.80	0.97	-3.78	0.76	-2.49	0.27	-3.57	9.01	+4.24	4.67	+2.31	1.33	-0.91	1.95	+0.31	26.67	-10.64
Palmyra	1.38	.....	1.99	.....	1.34	.....	1.97	.....	2.68	.....	0.29	.....	1.34	.....	0.78	.....	6.44	.....	2.29	.....	1.34	.....	2.07	.....	23.91	.....
Paris	1.75	.....	1.04	.....	1.56	.....	1.59	.....	2.63	.....	0.22	.....	1.60	.....	0.34											



Monthly and Annual Precipitation for the Year 1936, with Departures from Normal—Concluded

Stations	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure
<i>Southeastern Division—concluded</i>																										
Bellevue	0.56	-2.62	1.61	-0.89	1.44	-2.54	2.04	-2.72	1.16	-3.19	3.26	-1.15	1.62	-1.96	2.45	-2.31	5.83	+2.15	5.60	+2.32	2.20	1.48	-1.68	3.05	1.48	-1.68
Birch Tree (near)	1.45	2.25	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81
Bragg City	1.04	-4.26	1.43	-1.90	3.74	-2.18	5.33	+1.07	2.10	-2.91	0.43	-3.81	6.55	+3.07	0.71	-5.27	11.41	+7.54	5.01	+1.91	2.79	-0.91	5.26	+1.31	45.80	-6.34
Campbell	0.94	-3.04	2.07	-0.33	2.17	-1.67	4.55	+0.67	1.54	-2.53	0.90	-3.40	2.47	-0.95	1.1	-3.90	3.59	-0.42	2.87	-0.43	2.24	-1.34	3.95	+0.28	27.29	-17.06
Cape Girardeau	1.35	-3.84	1.92	-1.46	2.77	-1.69	2.74	-1.78	1.57	-2.87	0.09	-3.72	3.25	-0.04	0.56	-3.13	4.88	+1.67	5.24	+1.88	1.65	-2.20	2.91	-1.63	28.93	-18.81
Caruthersville	1.01	1.82	0.78	0.78	2.47	1.53	1.51	1.73	0.85	5.37	3.69	3.89	2.30	2.47	2.63	2.30	2.47	2.63	2.30	2.47	2.63	2.30	2.47	2.63	2.30	2.47
Centerville	1.01	1.82	0.78	0.78	2.47	1.53	1.51	1.73	0.85	5.37	3.69	3.89	2.30	2.47	2.63	2.30	2.47	2.63	2.30	2.47	2.63	2.30	2.47	2.63	2.30	2.47
Crystal City	1.01	1.82	0.78	0.78	2.47	1.53	1.51	1.73	0.85	5.37	3.69	3.89	2.30	2.47	2.63	2.30	2.47	2.63	2.30	2.47	2.63	2.30	2.47	2.63	2.30	2.47
Cuba	1.01	1.82	0.78	0.78	2.47	1.53	1.51	1.73	0.85	5.37	3.69	3.89	2.30	2.47	2.63	2.30	2.47	2.63	2.30	2.47	2.63	2.30	2.47	2.63	2.30	2.47
Dexter	0.97	-4.07	1.48	-1.60	2.96	-1.92	4.55	-0.04	2.14	-2.65	1.87	-3.34	1.82	-1.30	0.76	-3.36	8.71	+4.19	6.44	+2.18	2.43	-1.49	6.29	+2.30	39.62	-11.10
Doniphan	0.38	-3.72	1.60	-1.71	1.54	-2.85	5.21	+0.28	1.48	-2.88	0.84	-3.52	4.71	+0.70	0.30	-3.94	5.13	+1.52	5.45	+2.39	2.08	-1.34	3.90	+0.18	32.65	-14.89
Farmington	0.72	-2.42	0.98	-1.54	1.66	-2.26	3.67	-0.85	0.99	-4.08	1.84	-2.04	1.50	-2.06	0.09	-4.21	5.90	+2.10	5.03	+1.59	1.93	-0.89	2.59	-0.21	26.90	-16.87
Fisk	0.65	2.53	2.23	2.23	4.47	0.79	1.20	2.51	0.36	11.62	3.89	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76
Fredericktown	0.79	-2.92	1.84	-0.79	1.48	-2.17	3.05	-1.43	0.60	-3.49	1.18	-3.05	2.87	-0.35	0.40	-3.86	7.05	+3.09	6.38	+1.99	2.58	-0.74	3.85	+0.68	32.07	-13.04
Goodland	0.73	-1.97	2.04	-0.24	1.69	-2.20	1.71	-3.18	0.98	-3.53	2.29	-1.77	0.47	-3.22	0.63	-3.61	8.49	+4.63	5.47	+1.88	2.80	+0.08	3.23	+0.78	30.53	-12.35
Greenville	0.19	-3.13	0.94	-1.78	1.27	-2.99	3.49	-1.21	2.07	-2.11	1.42	-3.27	0.97	-2.79	0.48	-3.80	7.12	+3.80	5.51	+2.23	3.14	-0.22	5.57	+2.21	32.17	-13.06
Jackson	0.87	-3.07	2.35	-0.53	2.78	-1.39	4.15	-0.19	2.65	-1.62	3.40	-1.29	0.98	-2.56	0.32	-3.76	3.45	-0.57	2.98	-0.54	2.53	-0.85	4.45	+2.02	31.91	-14.35
Koskionong	0.92	-2.70	1.90	-0.96	1.26	-2.84	3.46	-1.56	0.88	-3.67	1.55	-2.95	2.77	-1.00	0.70	-3.46	7.88	+4.24	5.74	+2.52	1.81	-1.45	4.87	+1.39	33.74	-12.44
Leeper	0.34	-3.56	1.69	-0.96	1.33	-2.31	3.36	-1.56	1.20	-3.20	1.54	-3.90	1.40	-1.92	0.91	-3.20	9.55	+6.32	5.38	+1.47	2.71	-0.67	4.79	+1.01	34.20	-12.48
Licking (near)	0.97	-2.90	2.40	-0.68	2.28	-2.00	3.36	-1.13	1.97	-2.52	1.13	-3.35	1.05	-2.97	0.35	-3.77	5.58	+1.70	3.95	+0.53	2.15	-1.40	4.46	+0.79	29.65	-17.70
Marble Hill	0.46	2.20	1.26	1.26	3.15	1.28	0.32	0.38	0.32	0.38	0.32	0.38	0.32	0.38	0.32	0.38	0.32	0.38	0.32	0.38	0.32	0.38	0.32	0.38	0.32	0.38
Meramec Park	0.61	-4.30	0.74	-3.00	1.65	-1.26	4.19	-0.66	3.10	-1.18	2.44	-1.79	2.15	-0.86	0.77	-3.14	6.05	+2.13	6.52	+2.99	2.52	-1.11	4.13	-0.09	36.87	-12.27
Morehouse	0.92	-4.57	1.95	-1.80	4.05	-0.78	5.21	+0.63	2.02	-2.41	1.45	-3.05	6.29	+2.32	0.58	-3.52	13.69	+10.10	4.45	+0.68	3.83	-0.20	2.76	-1.85	47.20	-4.45
New Madrid	0.38	-1.44	1.31	-0.35	0.91	-2.41	1.98	-1.33	1.15	-3.65	0.87	-3.78	0.51	-3.11	1.24	-2.60	6.59	+3.10	2.62	-0.81	2.82	+0.01	2.93	+0.60	23.31	-15.77
Owensville	0.84	-4.42	1.75	-1.13	2.99	-2.37	5.45	+1.21	1.60	-2.56	0.42	-3.06	4.58	+0.69	0.20	-4.37	8.84	+3.79	7.41	+1.57	3.14	-1.33	3.69	-1.09	34.21	-13.07
Parma	0.66	-3.76	1.65	-1.24	1.42	-2.94	5.04	+0.53	1.99	-2.53	0.65	-3.47	4.00	+0.06	0.53	-4.00	10.82	+6.93	5.59	+1.93	2.68	-0.80	3.91	-0.08	38.94	-9.41
Poplar Bluff	0.33	-2.13	1.31	-0.74	1.40	-2.23	2.41	-1.81	1.38	-3.37	2.45	-1.96	2.35	-1.04	1.78	-2.66	9.70	+5.56	3.73	+0.27	2.06	-0.62	2.48	+0.30	31.38	-10.43
Rolla	1.32	-1.02	1.97	-0.66	1.67	-1.71	2.80	-1.01	0.85	-3.49	3.07	-0.75	0.60	-2.38	0.85	-2.14	5.94	+2.42	2.79	+0.07	2.20	-0.63	2.08	-0.13	26.14	-11.37
St. Louis	1.38	-1.22	1.96	-0.35	1.45	-1.89	2.54	-1.32	1.06	-3.13	1.88	-1.71	0.78	-2.40	0.71	-3.23	5.78	+2.02	2.31	-0.85	2.02	-0.52	1.76	-0.68	23.63	-15.28
St. Louis University	0.42	-2.30	1.10	-1.18	1.59	-2.28	2.09	-2.41	1.81	-2.70	4.86	+0.21	2.60	-0.90	1.90	-2.67	8.18	+4.30	3.04	-0.58	3.03	+0.39	1.90	-0.64	32.52	-10.76
Salem	0.74	-4.12	1.86	-1.36	3.48	-0.98	4.23	-0.39	2.87	-1.37	0.61	-3.58	4.45	+0.73	0.35	-3.45	5.93	+2.05	4.45	+1.18	1.70	-1.86	3.83	-0.11	34.50	-13.26
Sikeston	0.85	-1.47	1.64	-0.56	1.14	-2.16	2.35	-2.01	1.49	-3.05	0.08	-4.22	0.84	-3.10	1.95	-2.75	4.97	+0.78	3.31	-0.17	2.56	-0.19	2.12	-0.09	23.30	-18.99
Union	1.14	-1.12	1.73	-0.16	1.56	-1.81	3.08	-1.04	0.88	-3.59	0.71	-3.17	0.67	-2.25	0.88	-3.17	6.30	+2.76	3.11	-0.28	2.52	-0.08	2.09	-0.09	24.67	-13.99
Valley Park	0.35	-4.11	1.88	-0.76	1.27	-2.63	3.58	-1.14	1.65	-2.82	1.96	-3.87	1.92	-2.11	0.64	-4.70	7.28	+3.91	5.82	+1.71	2.22	-1.37	5.17	+0.81	33.74	-17.08
Williamsburg	0.57	-2.61	1.69	-0.87	1.07	-3.17	2.02	-2.82	1.19	-3.41	3.61	-1.22	2.77	-1.03	1.15	-3.93	9.54	+5.46	4.34	+1.02	2.02	-1.32	3.24	+0.41	32.21	-13.46
Willow Springs (near)	0.95	-2.81	2.01	-1.21	4.01	+0.29	3.79	+0.07	1.72	-1.99	2.18	-1.65	2.64	-0.43	0.12	-2.90	3.57	+0.68	3.81	+1.05	2.78	-0.90	4.06	+0.66	31.67	-9.14
Zalma	0.77	-2.50	1.73	-0.91	1.98	-2.10	3.41	-0.90	1.54	-2.94	1.57	-2.65	2.37	-1.14	0.72	-3.15	7.12	+3.36	4.43	+1.39	2.49	-0.72	3.60	+0.68	31.73	-11.58
State means	1.01	-1.30	1.50	-0.56	1.27	-1.99	2.45	-1.46	2.52	-2.25	1.42	-3.19	1.52	-2.16	0.84	-3.00	8.62	+4.44	3.55	+0.63	1.89	-0.77	2.83	+0.67	29.42	-10.95

† Estimated ‡ Partially estimated † Indicates plus †† 10.08 partially estimated ††† Incomplete

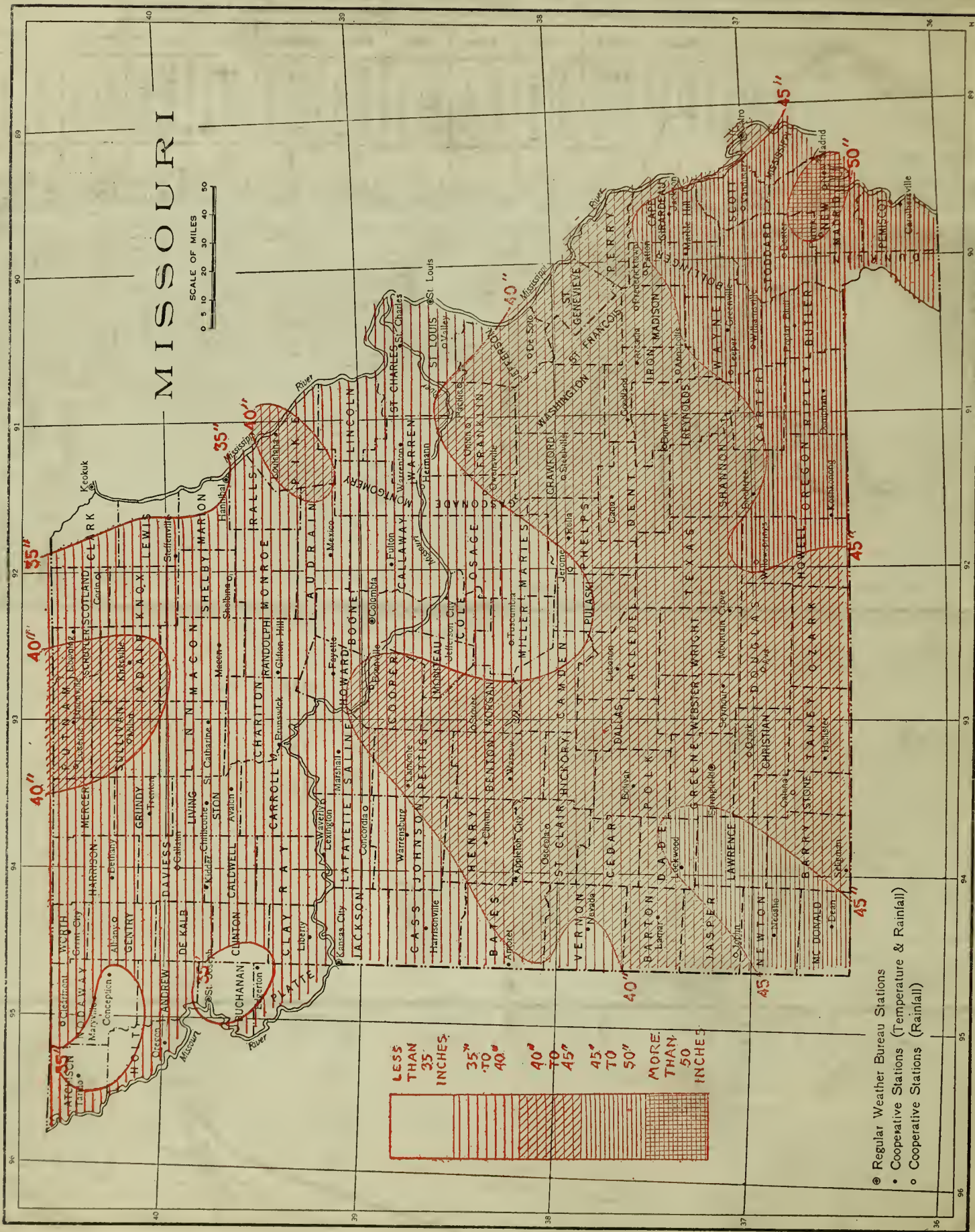
Continued from page 61

## KILLING FROSTS, 1936

Stations	Last in Spring	First in Autumn	Stations	Last in Spring	First in Autumn
<i>Northern Division</i>			<i>Southwestern Division (continued)</i>		
Bethany .....	April 22	Oct. 23	Jefferson City .....	April 22*	Oct. 27
Brunswick .....	April 22*	Oct. 23	Lakeside .....	April 22*	Oct. 24*
Chillicothe .....	April 22*	Oct. 23	Lamar .....	April 8*	Oct. 24
Clifton Hill .....	April 22	Oct. 23	LaMonte .....	April 23*	Oct. 24
Columbia .....	April 22	Oct. 24	Lebanon .....	April 22	Nov. 3
Conception .....	April 22*	Oct. 22*	Lexington .....	April 22*	Oct. 23
Downing .....	April 22	Oct. 23	Lockwood .....	April 7*	Nov. 3*
Edgerton .....	April 22*	Oct. 23	Marshall .....	April 22*	Oct. 23
Elsberry .....	April 23*	Oct. 24*	Mountain Grove .....	April 22*	Oct. 24*
Fayette .....	April 19	Oct. 23	Neosho .....	April 7	Nov. 4
Fulton .....	April 22	Oct. 24	Nevada .....	April 22*	Oct. 24
Grant City .....	April 18	Oct. 22	Seligman .....	April 8*	Oct. 27*
Hannibal .....	April 22*	Oct. 23*	Seymour (near) .....	April 22*	Oct. 24
Kansas City .....	April 7	Nov. 3	Springfield .....	April 3	Nov. 3
Kidder .....	April 22*	Oct. 22*	Versailles .....	April 22	Oct. 24
Kirkville .....	April 22*	Oct. 23	Warrensburg .....	April 7*	Oct. 23
Louisiana .....	April 23*	Oct. 23*	Warsaw .....	April 22	Oct. 24
Macon .....	April 22*	Oct. 23	<i>Southeastern Division</i>		
Maryville .....	April 18	Oct. 22	Arcadia .....	April 24*	Oct. 24*
Mexico .....	April 22	Oct. 23*	Birch Tree (near) .....	April 19*	Oct. 24*
Moberly .....	April 22*	Oct. 23	Campbell .....	April 22*	Oct. 28*
Oregon .....	April 22*	Oct. 23	Caruthersville .....	April 3*	Nov. 4
St. Charles .....	April 18	Oct. 24	Crystal City .....	April 22*	Oct. 24*
St. Joseph .....	April 7*	Oct. 22*	Doniphan .....	April 19*	Oct. 28*
Steffenville .....	April 22	Oct. 23	Farmington .....	April 23*	Oct. 24*
Tarkio .....	April 22	Oct. 22	Goodland .....	May 15*	Oct. 24*
Trenton .....	April 22*	Oct. 22*	Greenville .....	April 24*	Oct. 24
Unionville .....	May 3*	Oct. 22*	Jackson .....	April 22*	Oct. 28
Warrenton .....	April 22*	Oct. 21	Koshkonong .....	April 8*	Oct. 23*
Keokuk, Iowa .....	April 18	Oct. 23	Marble Hill .....	April 19	Oct. 24
<i>Southwestern Division</i>			Poplar Bluff .....	April 19*	Oct. 28*
Appleton City .....	April 7	Oct. 24	Rolla .....	April 22*	Oct. 24
Clinton .....	April 22*	Oct. 23*	St. Louis .....	April 8	Oct. 24
Dean .....	April 23	Nov. 3	St. Louis Univ. .....	April 8	Oct. 27
Eldon .....	April 23*	Oct. 24	Salem .....	April 18	Oct. 24
Garber .....	April 23*	Nov. 4	Sikeston .....	April 18	Oct. 29
Harrisonville .....	April 22*	Oct. 23	Cairo, Ill. ....	April 7	Oct. 28



NORMAL ANNUAL PRECIPITATION. (Based upon all available records for a 35-year period, 1898-1932)





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# CLIMATOLOGICAL DATA

19 **MISSOURI SECTION**  
**ROSCOE NUNN**  
**ST. LOUIS, MO.**  
**VOL. XLI JANUARY 1937 No. 1**  
PRICE: 5 CENTS A COPY; 25 CENTS A YEAR

## GENERAL SUMMARY

Temperatures averaged very low in the northern half of the State, due to a persistent cold spell, 7th to 26th, inclusive, but there were only a few days with sub-zero readings. In the southern half temperatures averaged moderate to mild, decidedly mild in the lower southeastern counties. For contrast, note that the average of minimum readings at Unionville, near the north-central border, was 7.6°, but at Caruthersville, in the extreme southeast, 32.2°.

There was also a great contrast in precipitation, with about 2.5 inches for the month in the extreme northwestern portion and 16 inches in the extreme southeast. The whole southern half of the State received considerably more than normal precipitation, and record-breaking excesses occurred in the lower southeastern portion, where ten counties received 10 inches or more, six of them more than 14 inches, and two (New Madrid and Pemiscot) slightly more than 16 inches. Twenty stations in the ten counties had the heaviest precipitation of record for January in their respective localities, and at several stations all-time high records for any month were closely approached. The excessive downpours occurred principally around the 14th and the 21st-23d.

Farm work was suspended most of the month. Wheat and other winter grains and grasses apparently were in fairly good condition, although it was feared the ice sheet in the northern section might be injurious.

The outstanding events were the sleet and ice storm (glaze) of the 7-8th and the floods of the middle and latter parts of the month in the lower southeastern section. The ice glaze was the heaviest in many years in Missouri. About one-half of the State was affected, and the effects were severe in a belt extending in a southwest direction from Clark, Lewis, and Marion counties on the northeast border to the southwest border. A strip about 50 to 75 miles wide in this belt suffered the maximum damages, with ice 1 to 2 inches thick on wires and considerably thicker on ground surfaces. A southeastern area, including Scott and Mississippi counties, also suffered severely. Mixed with the ice sheet was a heavy fall of sleet, varying in amount from 1 to 6 inches and averaging about 3 inches in most of Northern Missouri and the west-central counties. The sleet, by partially melting, then freezing, formed, together with the glaze, a thick coating of ice that lasted for two to four weeks and caused much inconvenience, many accidents, and great damage, including the loss of scores of horses and cattle. The damage to telephone and telegraph lines was enormous. The Southwestern Bell Telephone Company reported wire breaks in Missouri numbering 125,000; poles down or leaning, 18,000; miles of wire requiring replacement, 10,000; local service wires affected, 20,000; local stations out of service, 7,600; long distance circuits out of service, 550; and total cost of restoring equipment, approximately \$1,500,000.

Floods occurred in the Black River, the St. Francis, and the Mississippi (at and below the mouth of the Ohio). At Fisk, Mo., the St. Francis River reached 26.2 feet on January 16-17, and would have gone higher but for the breaking of levees. (Highest of record at Fisk, 26.9 feet in May 1933). Levee breaks on January 15 and later were followed by heavy flood-

ing of thousands of acres of lowlands, and much rescue work was necessary in Stoddard, Dunklin, and Butler counties, with hundreds of families driven from their homes. Most of the highways were under water in places. Many hundreds of horses, cattle, hogs, and chickens perished. Estimates of the losses are not yet available. In the Black River the flood was not very severe, as the crest at Poplar Bluff was 17.6 feet, but  
(Continued on page 4)

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind				Relative humidity			Percentage of sunshine
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12 noon	6:30 p. m.	
Columbia.....	30.15	30.64	10	29.56	2	9.0	27	sw.	2	87	76	77	40
Kansas City.....	30.15	30.66	10	29.52	13	10.3	39	w.	2	81	70	72	50
St. Joseph.....	30.15	30.63	10	29.46	13	10.0	35	w.	2	82	66	71	54
St. Louis.....	30.15	30.58	10	29.54	2	11.9	35	s	8	82	74	78	35
Springfield.....	30.11	30.60	10	29.55	17	10.6	28	e.	19	87	76	80	36
Cairo, Ill.....	30.14	30.53	10	29.64	17	11.0	30	n.	21	90	84	84	28
Keokuk, Iowa..	30.17	30.65	10	29.50	2	8.1	30	sw.	2	73	65	67	41

## COMPARATIVE DATA FOR JANUARY

Year	Temperature			Precipitation					Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy
1888.....	21.5	74	-32	2.14	1.76	2.20	2.47	....	6	..	..	..
1889.....	31.8	69	-2	2.53	1.65	2.48	3.45	....	6	..	..	..
1890.....	33.8	81	-19	5.18	3.23	4.18	8.14	4.3	6	..	..	..
1891.....	34.1	74	-1	1.63	1.36	0.98	2.56	....	4	..	..	..
1892.....	24.0	67	-31	1.87	1.80	1.87	1.93	....	4	..	..	..
1893.....	22.5	66	-14	0.45	0.51	0.41	0.42	2.4	3	9	11	11
1894.....	31.4	77	-35	2.48	1.90	2.95	2.59	2.7	5	13	6	9
1895.....	24.7	78	-22	1.66	0.97	1.44	2.57	2.4	4	10	7	14
1896.....	32.9	71	-9	1.19	1.05	0.85	1.67	3.1	4	11	7	12
1897.....	28.4	72	-16	5.24	4.18	5.50	6.04	4.0	8	12	7	12
1898.....	34.3	75	-10	4.11	4.02	3.84	4.48	8.4	9	11	8	11
1899.....	30.2	70	-21	1.93	0.62	1.20	3.96	4.0	6	12	8	11
1900.....	34.5	77	-9	1.28	0.98	1.18	1.67	0.2	4	14	7	10
1901.....	35.0	72	-11	1.31	1.21	1.45	1.27	0.8	5	16	7	8
1902.....	30.1	72	-17	1.36	1.07	0.95	2.08	6.9	5	13	6	12
1903.....	31.4	73	-11	1.49	1.07	1.41	1.98	5.0	6	13	6	11
1904.....	27.0	66	-23	3.01	2.64	2.74	3.66	7.4	8	14	6	11
1905.....	22.3	72	-19	2.04	1.06	2.10	2.95	6.8	8	14	5	12
1906.....	35.6	77	-8	3.44	2.20	3.07	0.75	9.2	6	14	6	18
1907.....	34.3	79	-5	5.04	4.14	5.28	5.69	2.8	12	7	6	18
1908.....	34.4	68	-10	1.67	0.50	1.47	3.04	3.6	5	19	5	7
1909.....	33.7	83	-20	2.36	2.01	1.70	3.36	6.5	7	6	7	18
1910.....	32.3	78	-24	1.82	1.96	1.73	1.78	3.5	5	13	6	12
1911.....	34.6	78	-19	0.84	1.57	0.82	0.64	0.7	5	8	7	16
1912.....	20.0	70	-36	1.22	0.35	0.79	0.58	2.6	8	13	6	12
1913.....	34.1	74	-12	4.18	1.53	2.63	8.58	1.95	1.0	4	12	7
1914.....	38.1	78	-1	1.45	0.96	1.43	1.95	5.4	8	12	5	14
1915.....	29.1	76	-24	2.88	2.29	2.48	3.86	3.4	12	9	4	18
1916.....	31.6	72	-24	7.66	5.23	8.32	9.42	2.3	5	15	7	9
1917.....	32.9	76	-10	1.53	0.75	1.05	2.79	2.3	5	12	7	12
1918.....	16.4	67	-24	1.72	1.08	1.45	2.63	16.6	7	12	7	12
1919.....	34.0	72	-23	0.44	0.14	0.32	0.85	1.4	2	20	5	6
1920.....	28.6	70	-5	1.72	0.52	1.39	3.25	5.7	5	15	5	11
1921.....	37.1	74	-1	1.88	1.42	2.07	2.15	5.4	6	10	7	14
1922.....	29.5	66	-6	1.33	1.08	1.41	1.50	3.9	5	14	5	12
1923.....	29.2	75	3	2.58	0.77	2.21	4.77	0.6	6	12	7	12
1924.....	24.9	68	-25	1.59	1.08	1.64	2.05	5.7	7	14	5	12
1925.....	29.7	65	-15	1.05	0.41	1.29	1.44	4.7	4	15	7	9
1926.....	32.7	70	-20	1.93	1.28	1.91	2.60	4.2	6	11	7	13
1927.....	30.8	73	-24	3.05	0.90	2.43	5.81	3.6	6	13	6	12
1928.....	33.3	77	-18	0.97	0.31	0.81	1.80	0.5	3	16	7	8
1929.....	25.1	72	-13	3.51	2.77	2.79	4.96	6.8	8	11	6	14
1930.....	20.8	73	-31	4.62	2.38	4.18	7.30	13.0	10	12	5	14
1931.....	36.0	76	-5	0.74	0.39	0.65	1.18	2.0	4	16	6	9
1932.....	36.4	73	-7	3.56	1.78	3.23	5.66	1.0	9	10	7	14
1933.....	31.4	72	-8	2.56	1.73	2.62	3.34	0.5	6	14	8	9
1934.....	36.1	71	-6	1.34	0.88	1.33	1.82	1.5	5	13	6	12
1935.....	33.0	71	-12	2.57	1.47	2.44	3.81	0.5	7	12	6	13
1936.....	24.4	74	-25	1.01	1.69	0.56	0.77	7.6	7	11	7	13
1937.....	28.5	70	-15	6.38	3.66	5.20	10.28	4.3	11	9	5	17
Period.....	30.8	83	-36	2.39	1.61	2.16	3.41	4.4	6	13	6	12



## Climatological Data for January 1937

		Temperature, in degrees Fahr.										Precipitation, in inches				Number of days				Prevailing direction of wind	Observers
Stations	Counties	Elevation, feet	Length of record, years	Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from the normal	Greatest in 24 hours	Total snow fall, unmelted	With precip., .01 inch or more	Clear	Partly cloudy	Cloudy			
Northern Division																					
Bethany	Harrison	916	42	20.0	- 4.8	46	6	- 2	9	30	3.85	+2.66	1.50	1.0	5	15	7	9	n.w.	A. S. Cumming	
Brunswick	Chariton	652	56	23.8	- 2.9	59	1	- 2	9†	34	4.82	+3.23	2.95	4.0	9	13	2	16	ne.	O. K. Beuecke	
Chillicothe	Livingston	779	28	19.6	- 4.8	49	1	- 2	9	31	3.52	+2.04	1.98	2.0	5	13	4	14	n.w.	Wm. J. Olenhouse	
Chilton Hill	Randolph	731	38	24.5	- 3.6	47	1†	- 2	23	33	4.65	+2.93	3.05	2.5	6	12	2	17	ne.	Dr. A. J. Bradsher	
Columbia	Boone	740	47	25.8	- 3.4	51	20	- 6	23	29	4.03	+2.11	1.67	5.0	11	10	3	18	se.	U. S. Weather Bureau	
Conception	Nodaway	980	48	18.1	- 6.6	44	1	- 5	9†	32	2.16	+1.37	1.45	1.1	6	13	8	10	e.	Fr. Adelhelm Hess	
Downing	Schuyler	876	16	22.0	- 3.4	43	2†	- 2	9	33	2.77	+1.45	1.53	0.2	5	14	3	14	n.w.	Everett Rowe	
Edgerton	Platte	856	17	21.4 <sup>a</sup>	- 5.5	52	6	- 1	9	37	2.38	+1.53	1.31	0.5	13	11	5	15	n.w.	Fred L. Stiff	
Elsberry	Lincoln	449	6	27.7	.....	54	20	- 10	23	42	4.41	+2.56	1.40	4.6	7	10	6	15	n.	Ray E. Mills	
Fayette	Howard	680	57	25.2	- 1.8	50	1	- 7	23	31	4.35	+1.80	1.55	10.7	14	11	4	16	se.	Harry P. Mason	
Fulton	Callaway	818	49	26.8	- 2.7	53	20	- 4	23	36	4.46	+2.44	1.55	10.7	14	11	4	16	se.	Clyde C. Herring	
Gorin	Scotland	700	50	.....	.....	.....	.....	.....	.....	.....	3.18	+1.80	2.03	0.5	6	14	3	14	n.w.	W. L. Harker	
Grant City	Worth	1,134	33	19.0 <sup>b</sup>	- 5.8	43	1†	- 5	9	31	2.50	+1.53	0.82	7	5	12	9	10	se.	Howard Rybolt	
Hannibal	Marion	759	45	24.5	- 2.6	46	1	- 3	23	32	4.30	+2.58	1.65	6.1	10	11	2	18	ne.	Hannibal Water Dept.	
Kansas City	Jackson	741	48	23.0	- 5.2	56	6	- 1	9	44	3.37	+2.18	1.94	3.6	9	9	6	16	n.	U. S. Weather Bureau	
Kidder	Caldwell	1,020	45	17.2	- 8.8	48	1	- 4	9	29	3.07	+1.85	1.81	0.5	6	11	6	13	se.	Roscoe L. Terry	
King City	Gentry	1,095	11	.....	.....	.....	.....	.....	.....	.....	2.65	+1.51	1.31	0.5	8	13	10	11	n.w.	John M. Martin	
Kirkville	Adair	969	48	21.8	- 3.0	43	1†	- 1	9	31	2.73	+1.21	0.95	0.1	6	14	16	11	n.	Charles Noble	
Linneus	Linn	816	5	.....	.....	.....	.....	.....	.....	.....	3.30	.....	1.79	1.0	6	14	2	15	n.w.	H. D. Taggart	
Louisiana	Pike	469	43	26.8	- 1.3	50	1	- 15	23	40	3.92	+1.77	2.00	5.0	9	13	6	12	n.	Stark Bro's Nurseries	
Macon	Macon	875	38	21.7	- 5.8	47	1	- 2	23	38	4.04	+2.34	2.53	2.8	7	13	4	14	n.w.	W. C. Brown	
Maryville	Nodaway	1,169	47	17.4	- 5.5	43	1†	- 5	9	32	2.16	+1.16	1.20	7	6	11	4	16	n.w.	R. B. Montgomery	
Mexico	Audrain	800	48	24.8	- 3.2	50	2†	- 10	23	42	4.72	+2.69	.....	6.0	12	10	2	19	w.	Mrs. Abbie Snoddy	
Moberly	Randolph	875	0	23.7	.....	47	6	- 5	23	29	4.45	.....	2.82	5.0	8	13	2	16	n.w.	J. W. Adams	
Monroe City	Monroe	748	16	.....	.....	.....	.....	.....	.....	.....	3.92	+2.01	2.53	2.5	6	2	8	21	s.	J. S. Conway	
Oregon	Holt	1,048	81	19.1	- 5.0	46	1	- 4	9	36	2.23	+1.30	0.70	1.0	6	14	7	10	n.w.	Miss Mma Wright	
St. Charles	St. Charles	520	49	29.3	- 1.7	61	7	- 0	23	34	4.91	+2.76	1.09	6.8	11	14	5	12	n.w.	Martin L. Comann	
St. Joseph	Buchanan	957	27	20.6	- 4.9	50	1	- 2	9	44	2.59	+1.31	1.58	0.5	8	11	9	11	n.w.	U. S. Weather Bureau	
Shelbina	Shelby	779	44	.....	.....	.....	.....	.....	.....	.....	3.84	+2.31	.....	4.0	7	.....	.....	.....	.....	J. C. Jewett	
Steffenville	Lewis	650	39	22.8	- 4.6	47	13	- 4	23	33	3.93	+1.92	1.30	3.5	9	13	4	14	n.	Frank Hall	
Tarkio	Atchison	916	34	15.8	- 7.1	44	4	- 7	9	36	2.64	+1.90	1.63	0.5	5	13	6	12	n.w.	Albert Volker	
Trenton	Grundy	822	41	20.6	- 5.7	47	1†	- 2	9	29	3.43	+2.09	0.99	0.5	7	9	11	11	n.w.	W. H. Estes	
Unionville	Putnam	1,062	44	19.0 <sup>a</sup>	- 4.5	43	6	- 4	10	38	2.81	+1.09	.....	1.0	6	14 <sup>a</sup>	4 <sup>a</sup>	12	n.	John H. Schick	
Warrenton	Warren	816	55	29.1	- 0.1	56	20	- 3	23	43	5.37	+3.18	1.25	8.5	14	4	10	17	n.w.	Prof. A. W. Ebeling	
Keokuk, Iowa	Lee, Ia.	574	66	21.9	- 3.0	46	6	- 1	23	31	3.36	+1.80	1.64	3.3	10	10	1	20	n.w.	U. S. Weather Bureau	
Division means and extremes		.....	.....	22.4	- 4.2	61	7	- 15	23	44	3.66	+2.05	3.05	2.9	8	11	6	14	n.w.		
Southwestern Division																					
Appleton City	St. Clair	853	42	26.2	- 5.1	53	1†	- 0	23	34	3.66	+1.82	1.15	5.0	10	12	2	17	ne.	Rolla Brown	
Buffalo	Dallas	1,200	7	.....	.....	.....	.....	.....	.....	.....	5.55	.....	1.06	4.5	12	9	10	12	.....	C. M. McCallister	
Caplinger Mills	Cedar	750	11	.....	.....	.....	.....	.....	.....	.....	5.99	+4.07	2.07	7.0	10	11	2	18	se.	Ozark Utilities Co.	
Clinton	Henry	765	44	26.8	- 4.9	55	1	- 5	9	35	3.56	+1.53	1.25	7.0	10	7	7	16	ne.	A. E. Derwent, M. D.	
Concordia	Lafayette	784	22	.....	.....	.....	.....	.....	.....	.....	3.67	+2.13	2.51	2.1	7	10	7	14	n.	Miss Ora Stratman	
Dean	McDonald	1,000	33	33.4	- 2.5	59	5	- 3	25	41	7.84	+5.31	2.38	10.5	11	8	4	19	w.	E. S. Taylor	
Eldon	Miller	934	42	26.6	- 4.5	58	6	- 4	24	44	4.96	+3.20	1.06	13.0	12	6	16	9	n.	E. H. Shepherd	
Garber	Taney	950	2	33.0	.....	63	20	- 9	22	39	5.96	.....	1.16	8.0	11	4	6	21	e.	William H. Durham	
Hailey†	Barry	1,350	12	.....	.....	.....	.....	.....	.....	.....	7.95	+5.03	2.10	15.5	12	10	12	9	se.	A. W. Madison	
Harrisonville	Cass	904	59	21.2	- 6.1	55	6	- 0	9	34	2.96	+1.39	1.58	1.0	7	10	3	18	n.	John H. Patterson	
Jefferson City	Cole	557	47	25.6	- 4.2	55	20	- 1	23†	36	5.33	+3.35	1.31	11.0	12	6	10	15	e.	Mrs. Frank Kliegel	
Lamar	Barton	980	49	28.5	- 3.6	58	20	- 1	23	35	4.69	+2.86	1.35	6.0	11	13	3	15	se.	Jesse A. Mann	
LaMonte	Pettis	867	36	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. E. Wheeler	
Lebanon	Laclede	1,265	49	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Lexington	Lafayette	688	52	22.4	- 5.4	53	1	- 0	9	33	3.63	+2.11	1.75	4.5	9	12	9	10	n.w.	Miss Carrie Loomis	
Lockwood	Dade	1,078	31	30.1	- 3.2	55	20	- 4	23	33	6.28	+4.42	1.61	6.0	11	10	8	13	se.	Hubert A. Nieman	
Marshall	Saline	779	50	25.2	- 2.7	50	1	- 0	23	33	4.33	+2.68	2.66	4.0	8	16	4	11	se.	Sec. Chamber of Commerce	
Mountain Grove	Wright	1,463	36	32.9	+ 0.1	62	8	- 8	22	41	7.02	+4.29	1.32	5.2	14	6	8	17	se.	Mo. Fruit Exp. Sta.	
Neosho	Newton	1,011	50	32.8	- 2.3	58	5	- 4	25	35	5.52	+3.05	1.04	6.5	14	10	6	15	ne.	U. S. Fisheries Sta.	
Nevada	Vernon	862	44	27.8 <sup>a</sup>	- 4.1	54	1	- 1	23	32	4.01	+2.18	2.00	5.0	9	10	4	17	ne.	T. J. Kaupp	
Seligman	Barry	1,542	36	32.8	- 2.3	60	8	- 6	22	45	6.51	+3.72	1.70	9.0	11	8	6	17	e.	Floyd E. Fawver	
Seymour (near)	Webster	1,642	31	31.0	- 3.0	60	8	- 7	22	40	5.92	+3.33	1.41	6.5	12	8	3	20	se.	A. L. Hailey	
Versailles	Greene	1,301	49	30.2	- 3.3	60	8	- 7	22	48	6.94	+4.60	1.55	8.0	15	7	8	16	se.	U. S. Weather Bureau	
Warrensburg	Morgan	1,037	5	28.2	.....	54	20	- 2	23	43	4.93	+2.93	1.27	8.6	13	10	4	17	n.	I. M. Wilson	
Warsaw	Johnson	878	50	25.8	- 2.9	53	1	- 2	23	36	4.76	+2.98	1.73	3.1	8	8	5	18	ne.	E. A. Markey	
Division means and extremes		687	36	29.2	- 3.7	55	20	- 2	23	37	5.18	+3.04	1.50	8.5	13	10	6	15	w.	Everett Martin	
		.....	.....	28.5	- 3.5	63	20	- 4	24	48	5.20	+3.04	2.66	6.9	11	9	6	16	se.		
Southeastern Division																					
Arcadia	Iron	926	56	30.6	- 1.3	63	7†	- 7	23†	42	8.71	+5.72	1.40	5.0	15	12	5	14	n.	Arcadia College	
Birch Tree (near)	Shannon	1,000	42	34.6	+ 0.1																



## Daily Precipitation for January 1937

Stations	Drainage-basins	Day of month																															Total			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
Northern Division																																				
Amity	Grand		.20	T.					T.	1.72					T.	T.						.28				T.						.80	.07	3.07		
Bethany	do		.51						..	1.50					T.	T.						.84				T.						1.00	..	3.85		
Bowling Green	Mississippi		.30						..	1.45	1.36						.15	.61					.24				T.						..	..	3.85	
Brunswick	Grand		.21						..	2.95							.02		.25				.42		.50			.05					.30	..	4.96	
Canton	Mississippi		.35						..	1.46	.24						.17	.12					.59		.17							.47	.32	4.82		
Chillicothe	Grand		.19	T.					..	1.98													.27									.01	.22	3.34		
Clifton Hill	Chariton		.31						..	3.05													.54									.80	T.	3.52		
Columbia	Missouri		.22	.02					..	1.26	.80						.43						.25	.28	.12							.53	..	4.65		
Conception	do			T.					..	.85	.60	T.											.47									.37	.09	4.03		
Downing	Mississippi		.13						..	4.01	.15												.98										.50	.12	2.77	
Edgerton	Missouri		.06						..	1.31	.53	T.											.03										.63	..	2.33	
Edina	Mississippi		.23						..	T.	1.60	.30	T.										.17	.34	.18								.12	.26	3.01	
Elsberry	do		.33						..	1.31	.55	.00	T.				.09	.85					.17	.34	.18								.17	.09	4.41	
Farber	do		.36						..	2.12													.18												3.73	
Fayette	Missouri		.30						..	1.40	1.26						.27						.52	.16									.44	..	4.35	
Fulton	do		.29						..	.01	1.55	.50	.06				.11	.78					.29		.52	.08						.08	.07	4.46		
Gallatin	Grand		.26						..	1.68													.40										.81	.05	3.17	
Gorin	Mississippi		.25						..	.43	1.60	T.											.32										.40	T.	3.18	
Grant City	Grand		.16						..	.64	.64												.24												2.50	
Hannibal	Mississippi		.35						..	1.65	.96						.04	.32					.49	.26	.03								.82	..	4.30	
Hermann	Missouri		.63						..	.04	1.41	.55	.06										.20										.18	.02	5.80	
Kahoka	Mississippi		.37						..	2.70													..	.50	.10								..	.45	..	4.12
Kansas City	Missouri		.12	T.					..	.02	1.74	.20	T.										.34										.02	.77	..	3.37
Kidder	Grand		.20						..	1.81													.22												3.07	
King City	Missouri		.02						..	.96	.35												.27												2.65	
Kirksville	Mississippi		.20						..	.63	.95		T.										.36										.10	.97	..	2.73
LaBelle	do		.32						..	1.75	.10												.56												3.60	
Linneus	Grand		.22						..	1.79	T.												.39												3.30	
Louisiana	Mississippi		..						..	2.00							.75	.25					.39												3.92	
Lucerne	Grand		.21						..	1.78													.36										..	.25	3.26	
Macou	Chariton		.34						..	2.53													.32										.38	.51	4.04	
Madison	Mississippi		.28						..	2.70	.11						.16	.20					.54										.29	.18	4.79	
Maryville	Missouri		.22						..	.03	.50	.70											.07												2.16	
Memphis	Mississippi		.22						..	T.	1.57	.10	T.										.24												2.85	
Mexico	do		.35						..	.03	..	2.50	T.										.52										.22	.46	4.72	
Milan	Grand		.38	.07					..	1.71	.89						.05	.35					.47	.09	.40	.20							.05	.25	4.53	
Moberly	Mississippi		.40						..	2.00	.82						.02	.18					.53	.14									1.04	.07	4.45	
Monroe City	do		.45						..	2.53	.21						.12						.65	.09									.29	..	3.92	
New London	do		.45						..	2.53	.21						.12						.65	.09											5.26	
Oregon	Missouri		.09						..	.63	.67	.05					.07						.91										.24	..	3.26	
Palmyra	Mississippi		.26						..	1.72													.09												2.23	
Paris	do		.30						..	2.00	.18												.48										.49	..	2.25	
Perry	do		.27						..	2.03													.65												3.87	
Philadelphia	do		.10						..	2.30	.15												.49												3.68	
St. Charles	Missouri		.32						..	1.51	.96	.70											.59												4.91	
St. Joseph	do		.08	.01					..	1.38	.20	T.											.19												4.91	
Shelbina	Mississippi		.29	T.					..	2.25													.06												2.59	
Shelbyville	do		.35						..	2.25													.52										..	3.55	3.84	
Steffensville	do		.35						..	1.30	.95						.10	.15					.25	.15									.65	..	3.55	
Tarkio	Missouri		.06						..	1.00													.25	.15											3.93	
Trenton	Grand		.19						..	.01	.84	.99	T.	T.									.38										.55	.40	2.64	
Troy	Mississippi		.47						..	.08	1.27	.33	.04										.20											.98	..	3.43
Unionville	Chariton		..						..	1.89													.58												4.25	
Warrenton	Mississippi		.40	T.					..	1.02	.60	.50	T.										.23	.50	.30									.22	.10	5.37
Keokuk, Ia.	do		.10	.34					..	.02	.79	.85	T.										.60	.14									.41	..	3.36	
Southwestern Division																																				
Appleton City	Osage		.05	T.					.05	1.09	1.15	T.					.21						.45	.21	.08		.03						.34	..	3.66	
Boonville																																				



## Daily Precipitation for January 1937—Continued from preceding page

Stations	Drainage-basins	Day of month																															Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Southeastern Div.—Concluded																																	
Cape Girardeau	Mississippi	.33					.73	.01	1.37	.28					1.81	2.02		.45	.05			.35	1.66	.81	.90		1.20					.35	12.32
Caruthersville	do	.30				.04	.91		1.45	.75				.52	.12	.41		.26	2.50			.15	4.00	2.00	1.10	.65						.60	15.76
Centerville	Black	.56					1.10	.46	.87	.40					1.39	1.13			.05			.16	T.	.45	.78		.25				T.	.29	7.59
Crystal City	Mississippi	.34					1.73	.14	1.12	.26				T.	.28	1.11						.41		.74	.20		.18						6.51
Cuba	Meramec	.95					1.10	.63							1.05									.20	.20						1.10	5.23	
Dexter	St. Francis	.40				.02	.80	.02	.59	.42					2.01	1.80		.10	1.02			.3	3.05	1.50	1.20	.03	1.02					1.70	15.68
Doniphan	Black	.03	.32			.52	.26	.15	1.72	.08		.04	.05	1.62		.05		.05				.65	1.09	.85	.03	.94					.11	.09	8.60
Farmington	St. Francis	.45				.09	1.65	.42	.66	.21				.04	1.72			.04				.16	.90	.64		.34					.14	.09	7.55
Fisk	do					1.11	.04	1.44	1.24					.04	.66	1.80		.11	.22			.39	2.19	1.23	1.14	.07	.87					.47	13.02
Fredericktown	do	T.				1.75	.40	1.05	.32						1.26	1.53						.16	.51	1.30	1.27		.61					.27	10.43
Goodland	Black	.42				.20	1.65	.41	1.40						.13	1.53						.10	.82	.70		.35					.30	8.01	
Greenville	St. Francis	.74				.63	.56	.72	1.75			.11		.05	6.15				.04			.80	.82	2.23	T.	.32					.27	15.19	
Jackson	Mississippi	.45				.18	.78	.17	1.65	.66					.13	5.43						1.22	1.50	1.55		.85					.32	15.05	
Koshkonong	Black	.12	.38			.22	.67	.20	.88	.34			T.	.05	4.46							.16	1.10	1.87		.42				.15		11.02	
Keeper	do	.43				T.	1.69	.14	1.11	.58				.04	2.41	1.42		T.				.12	.70	1.65	.66	.12	.33				.25	11.65	
Licking (near)	Gasconade					.43	1.36	.65	.03	.61					1.20	T.							.80	1.10	1.40		.70				.05	14.29	
Marble Hill	Mississippi	.45				.12	.70	.15	1.50	.50					.05	1.66	.20					.37	.87		2.02	2.41	1.82	.08	.33		.04	4.49	
Meramec Park	Meramec	.38					.58	.55	.82	.22					.19	.99			T.			.04		.34	.33						.30	13.85	
Morehouse	Mississippi	.37				.57	.22	T.	1.62	.96	T.	T.		.05	1.66	.20		.37	.87			2.02	2.41	1.82	.08	.33					.30	13.85	
New Madrid	do	.34	.01				.40			.70	1.37			.01	.55	.78		.21	.75			.12	3.25	2.10	1.92	.35	.60					.23	13.66
Owensville	Gasconade	.38					T.	1.06	.72		.40				T.	.11	1.10						T.	.45	.25		.11					.21	4.39
Parma	St. Francis	.45					.76		1.15	1.40					.47	1.35						.12	1.47		.10	3.60	2.95	1.17	.32	1.05		.25	16.61
Poplar Bluff	Black	.45					.93	.10	1.18	3.03					.75	1.16						.35	1.70	1.15	.95		.82				.36	13.11	
Rolla	Meramec	.55				T.	1.03	.40	.68	.18				T.	.21	.93						.09		.48	.28		.24				.34	5.41	
St. Louis***	Mississippi	.26	.09	T.		T.	1.00	.94	.28			T.	T.		14.1	1.14			.02			.13	.52	.19		.26					.24	5.21	
St. Louis University*	do	.08	.13			.07	.44	1.85	.04						.13	1.01			.02			.08	.56	.51		.22				.26		5.40	
Salem	Meramec	T.	.26				.12	.37	.55	.78					.04	1.25						.06	.72	.30		.18					.38	6.01	
Sikeston	Mississippi	.44					.75		.85	.30					.15	3.90			1.30			.15	3.90		3.20	.40	.55					.34	14.48
Union	Meramec	.34					.65	.85	.73	.19				.01	10.1	1.18						.20		.43	.32		.19					.19	5.38
Valley Park	do	.35					.62	.80	1.11	.29				T.	.15	1.00						.13		.41	.36						.18	.23	5.63
Williamsville	Black	.41					1.10	.10	1.21	1.00					.04	3.52	1.75					.17	.98	1.33	1.24		.85					.40	14.17
Willow Sprgs. (near)	White	.58				.02	1.50	.66	.70	.26					.70	1.30						.10		1.24	.59							.81	8.48
Zalma	Mississippi	.45					.91	.18							.40	1.10						.21		1.70	.59		.20				.36	13.26	
Cairo, Ill.	do	.22	.08				T.	.96	T.	.29	1.38	.40	T.	T.	.29	1.68	T.	T.	1.88	.02	T.	2.40	2.32	1.76	T.	1.43					.33	.01	15.45

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. † Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. T. Trace, or less than 0.01 inch.  
 \*\*\* Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. \*\* Precipitation in the next following measurement; separate dates of fall not recorded. \* Precipitation is for 24-hour period, midnight to midnight † Estimated. ‡ Partially estimated. ||||| Incomplete.

Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for January 1937  
(See precipitation data in table on preceding page)

Station	Data	Day of month																															Monthly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Lakeside	{ Evaporation .....	.045		....	....	....	.232	.022																									23.4
(Osage Dam)	{ Mean temperature ..	40	44	28	37	37	33	28	28	14	20	26	29	40	39	20	28	30	26	32	40	21	12	14	21	22	22	27	23	38	38	20	23.4
	{ Wind movement ..	55	96	242	121	109	94	99	67	82	65	59	67	52	121	116	72	113	101	81	126	109	121	65	65	98	55	48	49	51	77	91	2.770

Observations taken at 7.30 a. m. Wind movement corrected to true velocities. For description see April 1932 report.  
 .... Evaporation included in next measurement.

## Continued from page 1

tributaries in the vicinity of Williamsville, Wayne County, were very high and considerable damage resulted locally, including washing out of railroad tracks. The Mississippi flood had not yet reached crest at the end of January below the mouth of the Ohio, but the highest water of record was approaching. To protect Cairo, Ill., the water was turned into the spillway below Birds Point and all that area in Missouri was deeply flooded, driving out all inhabitants.

## TEMPERATURE

The monthly mean temperature for the State, 70 stations reporting, was 28.5°, or 2.3° below normal. The highest monthly mean was 40.2° at Caruthersville, and the lowest monthly mean was 15.8° at Tarkio. The highest temperature recorded was 70° at Caruthersville on the 14th, and the lowest was 15° below zero at Louisiana on the 23d. The greatest daily range was 50° at Sikeston on the 9th.

## PRECIPITATION

The average precipitation for the State, 127 stations reporting, was 6.38 inches, or 3.99 inches more than normal. The greatest local monthly amount was 16.61 inches at Parma, and the least local monthly amount was 2.16 inches at Conception and Maryville. The greatest amount in any twenty-four hours was 6.15 inches at Greenville on the 14th. The average number of days

with 0.01 inch or more of precipitation was 11. The snowfall averaged 4.3 inches, or 0.1 inch less than normal. The greatest monthly snowfall was 15.5 inches at Hailey. Sleet and glaze were quite heavy, particularly on the 7-8th.

## MISCELLANEOUS PHENOMENA

Floods.—In Black River, 10-11th and 15-18th. In Bourbeuse River on 17th. In Grand River on 31st. In Meramec River on 10th and 15-18th. In Mississippi River below the mouth of the Ohio, 10th and continued into February. In St. Francis River, 8-27th and on 31st.

Fog.—Dense, 5th, 6th, 7th, 8th, 11th, 12th, 13th, 14th, 17th, 18th, 20th, 23d, 24th, 29th, 30th.

Glaze.—6th, 7th, 8th, 10th, 12th, 13th, 14th, 17th, 20th, 21st, 22d, 24th, 29th, 30th.

Halos.—Solar, 1st, 16th, 18th, 25th, 27th, 31st; lunar, 18th, 20th, 21st, 23d, 25th, 27th.

Sleet.—2d, 6th, 7th, 8th, 9th, 10th, 14th, 19th, 20th, 21st, 22d, 23d, 24th, 28th, 29th, 30th, 31st.

Smoke.—Dense, 5th, 11th, 12th, 26th, 27th, 28th.

Thunderstorms.—Local, 1st, 7th, 9th, 10th, 13th, 17th, 19th, 20th, 21st, 22d, 24th, 30th; more or less general on 8th.

Windstorms.—No damaging winds reported.

## ERRATA

November 1936, page 52:—Prevailing wind direction at Hannibal should be W.



## Daily Temperatures for January 1937

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
Northern Division																																		
Brunswick §§	Maximum...	59	55	33	45	44	51	31	33	13	28	27	34	43	31	17	37	38	24	34	43	11	15	20	36	22	29	41	31	41	43	16	33.1	
	Minimum...	28	34	17	17	24	22	16	15	2	2	9	15	24	31	6	5	7	12	11	16	11	5	2	2	14	10	10	18	25	28	10	14.5	
Chillicothe §§	Maximum...	49	29	31	42	41	46	24	11	10	28	24	35	40	24	20	35	33	22	34	40	7	15	21	35	23	28	40	27	39	38	16	29.3	
	Minimum...	27	27	12	12	12	17	9	7	-2	1	5	9	18	21	3	4	8	8	15	1	1	2	5	7	2	10	12	17	24	3	9.8		
Columbia	Maximum...	51	45	28	46	41	50	32	31	16	24	27	32	48	42	20	37	38	27	37	51	24	13	18	35	24	32	42	35	42	22	33.9		
	Minimum...	36	20	19	28	27	31	21	8	7	14	18	24	32	13	8	15	21	14	19	24	9	4	-6	13	12	9	20	24	28	22	14	17.8	
Fayette	Maximum...	50	45	27	41	40	49	48	32	14	23	28	29	44	44	18	35	37	29	34	45	36	13	13	34	27	28	41	41	38	39	30	34.0	
	Minimum...	34	20	17	20	24	32	19	10	4	11	12	24	28	17	5	4	28	12	17	31	6	5	-7	13	12	4	15	21	28	29	11	16.3	
Grant City	Maximum...	43	40	23	42	38	43	16	3	-	24	26	27	38	38	14	30	29	21	28	37	18	16	20	32	27	25	39	36	24	32	20	b29.2	
	Minimum...	26	10	9	16	12	16	3	-1	-5	2	8	9	26	7	1	6	13	6	12	18	-4	0	0	12	5	5	18	16	14	13	-1	8.8	
Hannibal	Maximum...	46	45	25	43	37	44	42	31	15	22	26	27	46	46	16	34	35	33	33	45	37	10	17	31	29	26	40	34	37	39	39	33.2	
	Minimum...	30	22	16	19	20	29	21	14	4	8	13	21	25	16	3	3	29	12	15	29	5	3	-3	15	11	6	13	24	33	10	15.8		
Kansas City	Maximum...	53	47	31	43	39	56	15	14	12	24	25	32	41	38	14	36	37	24	32	41	14	18	21	34	25	34	46	36	43	45	15	31.8	
	Minimum...	35	17	17	30	25	12	8	1	1	9	9	24	32	7	4	6	15	12	14	14	4	5	9	19	12	11	20	22	24	13	7	14.1	
Kidder §§	Maximum...	48	23	31	32	39	40	12	4	6	17	30	36	40	19	11	30	27	20	34	39	5	13	19	32	16	25	36	23	38	37	12	25.6	
	Minimum...	25	21	10	10	16	16	6	2	-4	-1	4	7	21	17	2	4	9	7	8	14	0	-1	3	3	7	5	9	16	16	20	2	8.8	
Kirksville	Maximum...	43	43	24	40	36	43	43	30	13	24	23	32	41	41	19	31	35	28	28	41	29	12	16	30	26	26	40	36	33	38	24	31.2	
	Minimum...	27	17	12	14	13	25	12	8	-1	4	5	16	22	14	2	8	26	9	12	26	4	1	2	10	10	8	14	24	24	33	10	12.5	
Louisiana	Maximum...	50	40	37	45	40	45	40	25	20	25	30	30	45	46	40	40	45	35	37	46	40	12	16	32	20	30	40	38	40	40	37	35.7	
	Minimum...	25	34	17	20	25	30	24	20	9	12	10	24	25	35	6	25	35	14	14	30	12	4	-15	16	15	5	0	16	25	33	13	18.0	
Macon §§	Maximum...	47	39	34	44	39	45	32	31	13	22	26	34	44	31	17	38	37	22	35	43	12	13	19	33	21	26	40	30	39	39	31.1		
	Minimum...	27	33	14	15	17	19	15	15	1	3	9	15	18	29	1	0	9	10	10	14	9	3	-2	4	9	4	6	16	24	25	8	12.3	
Maryville	Maximum...	43	39	22	43	33	42	10	5	9	25	29	26	38	37	9	29	28	15	25	38	14	15	20	34	23	26	39	34	23	30	11	26.3	
	Minimum...	26	11	9	18	9	10	2	-2	-5	-2	9	10	26	8	0	7	11	6	13	14	-4	0	2	12	5	7	18	16	16	11	-1	8.5	
Mexico §§	Maximum...	49	50	31	46	43	50	44	36	13	25	32	34	42	45	20	40	44	25	38	50	22	20	22	33	38	31	44	37	43	40	24	35.8	
	Minimum...	28	33	16	20	23	23	21	21	6	4	12	20	22	32	5	5	13	12	12	16	15	2	-10	-5	10	2	2	11	19	27	12	13.9	
Moberly	Maximum...	42	40	25	40	36	47	45	30	12	22	27	30	41	41	16	26	34	26	32	44	34	11	15	32	27	25	40	35	40	40	29	31.7	
	Minimum...	32	18	15	20	21	31	21	8	4	10	15	22	30	15	8	4	26	11	10	30	5	4	-5	13	11	5	13	24	26	29	10	15.7	
Oregon	Maximum...	46	43	27	43	39	45	9	7	11	27	28	30	40	37	14	32	32	19	28	38	-15	15	22	33	27	33	43	37	26	31	14	28.7	
	Minimum...	23	12	10	24	12	9	2	-2	-4	3	11	17	28	6	0	8	12	6	14	15	-3	1	4	12	5	9	19	13	18	13	-1	9.5	
St. Joseph	Maximum...	50	43	50	43	35	50	10	8	10	29	29	31	41	36	14	34	35	23	30	39	7	17	21	33	23	30	44	35	32	37	14	29.5	
	Minimum...	32	14	13	30	19	6	5	-2	-2	6	13	22	30	5	3	10	13	10	16	7	0	4	8	15	9	11	22	16	21	8	2	11.8	
Trenton	Maximum...	47	37	31	42	35	47	27	15	11	24	26	30	41	34	15	31	29	30	32	40	29	14	21	34	25	26	39	34	34	37	16	30.1	
	Minimum...	27	16	12	18	15	26	9	-4	-2	0	6	9	25	14	4	7	4	9	14	24	0	2	0	8	8	5	17	22	18	16	3	11.0	
Unionville §§	Maximum...	40	42	33	40	39	43	35	27	27	10	32	30	33	34	18	10	15	34	39	40	30	12	32	30	25	23	40	38	-	-	0	*7.6	
	Minimum...	25	27	1	2	3	10	10	9	8	-4	-3	-3	7	12	2	0	-2	8	10	20	10	7	1	9	5	5	17	16	17	-	-	0	*7.6
Warrenton	Maximum...	47	49	29	48	46	48	48	32	28	26	33	33	46	51	30	34	39	37	37	56	55	12	17	33	33	27	43	42	45	41	41	38.3	
	Minimum...	31	28	17	21	27	33	30	37	27	12	14	16	24	28	30	12	31	16	17	31	15	4	-3	17	14	8	11	25	27	33	15	19.9	
Southwestern Division																																		
Appleton City	Maximum...	53	42	32	45	47	53	37	13	12	24	30	31	42	41	22	37	38	29	38	42	35	15	17	37	29	41	48	39	41	40	27	34.7	
	Minimum...	35	21	12	25	24	37	12	9	5	10	14	25	30	18	8	15	28	14	20	33	5	6	0	15	15	9	14	27	26	14	17.8		
Clinton	Maximum...	55	40	30	44	45	53	50	30	12	23	30	32	42	49	21	38	38	30	36	46	34	13	15	35	32	30	38	37	38	40	27	34.9	
	Minimum...	36	23	18	26	25	39	15	10	5	10	14	26	30	18	9	15	30	13	20	32	6	13	6	13	15	10	16	28	28	27	13	18.8	
Eldon §§	Maximum...	52	45	31	48	46	58	32	31	16	24	30	34	50	38	25	40	40	30															







MS

JUN 29 1942  
UNIVERSITY OF ILLINOIS

# CLIMATOLOGICAL DATA

19

## MISSOURI SECTION

ROSCOE NUNN  
ST. LOUIS, MO.

VOL. XLI

FEBRUARY 1937

No. 2

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### GENERAL SUMMARY

Although the month was colder than normal in most of the State, and decidedly so at some northern stations, there was but little severe winter weather in February. The coldest days were about the 1st-2d, when subzero readings occurred at a number of stations in the Northern and Western Divisions. It was cold again about the 9-10th, and the last week averaged much colder than normal. The comparatively mild periods were the 7-8th, 11-15th, and 17-20th.

Precipitation was rather light almost generally, but ample for surface moisture. The snowfall was considerably less than normal at most stations, but fairly heavy at a few stations in the central third of the State. Ice and snow that had accumulated in January melted in the warmer periods of February.

There was alternate freezing and thawing of the ground, and the surface was either frozen or in a semi-liquid state most of the time. But little field work could be done. Livestock in northern counties lost weight the first week or two, due to ice-covered ground and difficulties of feeding. At the end of the month wheat, barley, rye, and grasses were considered in fairly good condition generally.

Light or moderate floods occurred in some of the northern small streams and in the Grand River about the 14th and again about the 21st, due principally to melting of ice and snow. The great flood in the Mississippi River gave a crest stage of 47.9 feet at New Madrid, Mo., on the 3d, 4th, and 5th. This was decidedly the highest stage of record at that point, and caused the loss of some lives and enormous damage to property. Estimates of amount of losses are not yet available. The water did not get back within banks at New Madrid until February 27.

Damaging wind storms occurred on several dates, principally on the 8th, 20th, and 21st. See special article on the tornadoes of the 8th and 20th.

### TEMPERATURE

The monthly mean temperature for the State, 70 stations reporting, was 32.4°, or 0.5° below normal. The highest monthly mean was 39.2° at Campbell, and the lowest monthly mean was 21.8° at Unionville. The highest temperature recorded was 74° at Garber on the 7th, and the lowest was 15° below zero at Fulton on the 2d. The greatest daily range was 53° at Goodland on the 11th.

### PRECIPITATION

The average precipitation for the State, 128 stations reporting, was 1.38 inches, or 0.67 inch less than normal. The greatest local monthly amount was 2.80 inches at Seymour(near), and the least local monthly amount was 0.38 inch at Dean. The greatest amount in any twenty-four hours was 1.87 inches at Conception on the 20th. The average number of days with 0.01 inch or more of precipitation was 6. The snowfall averaged 3.5 inches, or 1.6 inches less than normal. The greatest monthly snowfall was 11.5 inches at Clinton.

### MISCELLANEOUS PHENOMENA

Dust.—Locally on 7th, 8th, 15th, 18th, 19th.

Floods.—In Grand River, 13-16th; 19-24th. In Mississippi River below the mouth of the Ohio, continued from January to February 27th.

Fog.—Dense, 7th, 8th, 18th, 19th, 20th.  
Glaze.—7th.

Hail.—Light, 20th at Appleton City, Garber, and Neosho; moderate, 20th at Seligman, Seymour and vicinity; heavy, 8th at Dexter.

Halos.—Solar, 5th, 12th, 13th, 21st; lunar, 17th, 18th, 19th, 20th, 21st, 22d.

(Continued on page 9)

### PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind			Relative humidity			Percentage of sunshine	
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12 noon		6:30 p. m.
Columbia.....	30.06	30.75	1	29.21	8	10.0	34	nw.	21	77	64	64	59
Kansas City.....	30.07	30.78	1	29.09	7	12.2	39	nw.	15	73	61	65	63
St. Joseph.....	30.06	30.77	11	29.14	7	10.2	32	nw.	13	76	61	70	61
St. Louis.....	30.06	30.72	2	29.29	8	14.8	39	nw.	21	71	59	61	46
Springfield.....	30.06	30.70	1	29.29	8	12.1	34	nw.	15	77	65	63	54
Cairo, Ill.....	30.08	30.66	2	29.45	8	11.4	32	sw.	21	87	83	80	56
Keokuk, Iowa..	30.05	30.76	1	29.14	8	9.8	34	nw.	21	71	56	62	60

### COMPARATIVE DATA FOR FEBRUARY

Year	Temperature			Precipitation						Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy	
1888.....	33.0	73	-17	2.22	2.04	2.22	2.39	....	7	..	..	..	..
1889.....	29.3	73	-9	2.74	1.80	3.12	3.30	....	7	..	..	..	..
1890.....	35.5	81	-8	2.71	1.12	2.04	4.97	....	7	..	..	..	..
1891.....	32.7	78	-13	2.45	2.05	2.33	2.96	2.4	6	..	..	..	..
1892.....	37.7	71	-8	4.31	3.47	5.40	4.06	....	9	7	6	16	..
1893.....	27.9	65	-26	2.17	2.02	1.49	2.99	4.6	6	10	7	11	..
1894.....	30.8	72	-13	2.70	2.15	2.01	3.93	11.2	6	10	8	10	..
1895.....	23.6	77	-26	0.57	0.48	0.55	0.67	3.3	5	10	10	8	..
1896.....	35.6	81	-10	1.67	1.50	1.22	2.30	4.1	5	12	8	9	..
1897.....	34.8	74	-15	2.51	1.47	2.79	3.27	8.2	7	7	14	..	..
1898.....	35.4	78	-9	1.61	1.54	1.47	1.81	0.8	5	13	6	9	..
1899.....	20.4	72	-32	2.30	1.75	2.06	3.10	5.3	6	12	8	8	..
1900.....	26.2	70	-16	4.00	3.87	3.35	4.77	16.6	10	10	6	12	..
1901.....	28.1	76	-19	1.74	1.41	1.51	2.31	7.6	6	13	7	8	..
1902.....	24.0	72	-17	1.62	0.89	2.10	1.88	5.5	5	11	8	9	..
1903.....	29.8	74	-25	3.25	1.98	3.34	4.42	5.8	7	11	6	11	..
1904.....	30.0	82	-18	1.02	0.64	0.63	1.78	1.5	5	11	8	10	..
1905.....	21.5	69	-40	1.68	1.72	1.69	1.63	13.2	8	11	6	11	..
1906.....	33.7	73	-13	2.42	2.66	2.17	2.43	4.8	7	15	6	7	..
1907.....	34.8	77	-15	1.28	0.79	0.92	2.12	4.5	6	12	5	11	..
1908.....	35.6	78	-7	4.32	2.83	4.20	5.94	4.1	9	13	6	10	..
1909.....	38.8	71	-4	3.24	2.37	2.52	4.82	3.1	9	13	5	10	..
1910.....	28.3	72	-24	2.17	0.92	1.89	3.71	10.2	6	13	5	10	..
1911.....	38.1	87	0	3.78	4.09	3.99	3.27	6.7	8	12	5	11	..
1912.....	28.3	72	-12	2.51	1.99	2.56	2.98	14.5	6	10	7	12	..
1913.....	29.8	78	-9	2.15	2.08	2.62	1.75	8.5	7	12	5	11	..
1914.....	28.3	75	-11	2.80	2.03	2.55	3.83	14.0	7	12	6	10	..
1915.....	39.4	72	7	3.07	2.48	3.53	3.21	4.1	8	9	5	14	..
1916.....	31.4	78	-12	0.98	0.79	0.73	1.42	5.0	5	13	6	10	..
1917.....	30.5	83	-22	0.42	0.16	0.24	0.85	1.4	2	14	7	7	..
1918.....	34.9	85	-25	1.06	1.25	0.80	1.12	0.6	4	15	6	7	..
1919.....	35.3	71	-10	1.96	1.98	2.08	1.82	6.4	7	13	4	11	..
1920.....	34.5	78	-5	0.62	0.33	0.40	1.14	1.2	4	11	6	12	..
1921.....	40.1	86	-5	1.03	0.55	0.74	1.79	1.8	4	14	6	8	..
1922.....	35.4	80	-5	1.83	1.37	1.62	2.49	1.9	5	14	6	8	..
1923.....	30.2	75	-9	1.58	0.52	1.26	2.97	1.4	5	13	5	10	..
1924.....	33.8	79	-5	1.84	1.58	1.92	2.03	8.1	7	14	4	11	..
1925.....	38.7	78	1	1.88	1.85	1.42	2.37	1.7	6	12	6	10	..
1926.....	39.4	76	-4	2.07	1.93	1.81	2.46	2.9	6	11	6	11	..
1927.....	41.3	78	1	1.07	1.07	0.90	1.25	2.3	5	10	8	10	..
1928.....	37.0	73	-2	2.27	2.18	2.17	2.47	1.8	7	12	6	11	..
1929.....	25.0	64	-23	1.96	1.31	1.72	2.86	9.4	7	10	5	13	..
1930.....	44.5	89	-5	1.75	0.95	1.49	2.80	1.3	4	13	8	7	..
1931.....	40.9	75	-5	2.49	1.46	2.82	3.20	0.3	6	12	6	10	..
1932.....	42.4	83	-3	1.47	1.00	0.99	2.43	2.0	6	12	7	10	..
1933.....	32.2	78	-22	1.45	0.74	1.26	2.35	4.2	5	14	7	7	..
1934.....	32.5	79	-26	1.34	1.00	1.32	1.70	7.0	5	15	6	7	..
1935.....	37.4	80	0	1.54	1.63	1.45	1.55	0.2	5	10	6	12	..
1936.....	23.2	78	-25	1.50	1.43	1.33	1.73	4.1	6	12	7	10	..
1937.....	32.4	74	-15	1.38	1.20	1.46	1.48	3.5	6	11	7	10	..
Period.....	32.9	89	-40	2.05	1.61	1.92	2.62	5.1	6	12	6	10	..



## Climatological Data for February 1937

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches			Number of days			Prevailing direction of wind	Observers			
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelting	With precip., .01 inch or more			Clear	Partly cloudy	Cloudy
Northern Division																				
Bethany.....	Harrison.....	916	42	25.6	-1.9	50	18	1	10	32	0.78	-0.64	0.72	2.0	3	11	8	9	nw.	A. S. Cumming
Brunswick.....	Chariton.....	652	56	28.3	-1.5	60	7	5	10	42	1.74	-0.07	1.40	8.7	4	13	1	14	nw.	O. K. Benecke
Chillicothe.....	Livingston.....	779	28	26.0	-6.3	55	7	2	10	41	0.87	-0.58	0.60	1.0	2	18	1	9	nw.	Wm. J. Olenhouse
Clifton Hill.....	Randolph.....	731	38	29.2	-1.0	59	8	3	10	43	1.45	-0.29	1.05	2.4	6	10	8	10	sw.	Dr. A. J. Bradsher
Columbia.....	Boone.....	740	47	31.2	-0.5	61	8	-9	2	43	0.66	-1.38	0.28	6.5	6	9	9	10	nw.	U. S. Weather Bureau
Conception.....	Nodaway.....	980	48	24.7	-3.5	49	18	0	1†	34	2.33	+1.18	1.87	9.0	6	9	6	13	nw.	Fr. Adelhelm Hess
Downing.....	Schuyler.....	876	16	26.2	-6.1	52	18	-1	2†	31	2.33	+0.95	1.40	3.8	5	8	9	11	s.	Everett Rowe
Edgerton.....	Platte.....	856	17	29.0	-5.3	55	8	5	10	40	1.05	-0.29	0.57	4.7	3	17	1	10	n.	Fred L. Stiff
Elsherry.....	Lincoln.....	449	6	31.2	.....	60	8	-6	2	36	1.90	.....	0.70	4.3	9	11	5	12	nw.	Ray E. Mills
Fayette.....	Howard.....	680	57	30.3 <sup>a</sup>	-0.3	58	8	-4	2	40	1.23	-0.47	0.85	3.0	6	5	15	8	sw.	Harry P. Mason
Fulton.....	Callaway.....	818	49	29.4	-3.7	62	7	-15	2	45	0.90	-0.77	0.40	7.5	8	11	6	11	nw.	Clyde C. Herring
Gorin.....	Scotland.....	700	50	.....	.....	.....	.....	.....	.....	.....	1.60	+0.20	1.00	6.0	6	15	5	8	nw.	W. L. Harker
Grant City.....	Worth.....	1,134	33	24.4	-4.2	49	18	-1	1	34	0.64	-0.47	0.60	7.5	4	9	9	10	nw.	Howard Rybolt
Hannibal.....	Marion.....	759	45	29.4	-0.3	55	12	1	10	28	0.59	-1.27	0.16	1.4	8	7	10	11	nw.	Hannibal Water Dept.
Kansas City.....	Jackson.....	741	48	31.2	0.0	61	7	9	10	38	0.86	-0.89	0.75	3.9	6	8	7	13	sw	U. S. Weather Bureau
Kidder.....	Caldwell.....	1,020	45	24.0	-4.4	52	18	2	1†	37	0.94	-0.60	0.86	3.0	3	13	7	8	nw.	Roscoe L. Terry
King City.....	Gentry.....	1,095	11	.....	.....	.....	.....	.....	.....	.....	0.67	-0.83	0.49	5.0	5	4	16	8	nw.	John M. Martin
Kirkville.....	Adair.....	969	48	26.1	-1.0	50	8†	-1	10	34	2.62	+1.09	1.28	6.0	7	6	12	10	nw.	Charles Noble
Linneus.....	Linn.....	816	5	.....	.....	.....	.....	.....	.....	.....	1.27	.....	1.01	1.2	4	12	8	8	nw.	H. D. Taggart
Louisiana.....	Pike.....	469	43	30.4	-0.5	55	18	4	10	33	0.78	-1.30	0.35	3.2	4	12	8	8	w.	Stark Bro's Nurseries
Macon.....	Macon.....	875	38	26.6	-3.0	59	7	2	10	48	0.99	-0.71	.....	3.0	4	14	7	7	w.	W. C. Brown
Maryville.....	Nodaway.....	1,169	47	24.2	-1.6	50	18	0	10	35	0.91	-0.52	0.80	8.6	7	11	7	10	nw.	R. B. Montgomery
Mexico.....	Audrain.....	800	48	29.4	-0.7	58	7†	-9	2	45	0.90	-0.95	0.52	1.2	7	13	2	13	w.	Mrs. Abbie Snoddy
Moberly.....	Randolph.....	875	0	29.4	.....	59	8	3	10	44	1.50	.....	1.07	2.7	9	12	5	11	nw.	J. W. Adams
Monroe City.....	Monroe.....	748	16	.....	.....	.....	.....	.....	.....	.....	0.79	-0.62	0.48	1.0	6	10	8	10	se.	J. S. Conway
Oregon.....	Holt.....	1,048	81	26.8	-2.0	52	18	0	1	33	1.14	-0.23	1.00	8.5	5	13	10	5	nw.	Miss Mina Wright
St. Charles.....	St. Charles.....	520	49	33.6	+0.3	65	7	5	2	46	1.15	-0.84	0.55	1.2	5	15	7	6	nw.	Martin L. Comann
St. Joseph.....	Buchanan.....	957	27	27.6	-2.0	54	18	4	1	31	0.89	-0.78	0.71	5.7	6	13	4	11	nw.	U. S. Weather Bureau
Shelbina.....	Shelby.....	779	44	.....	.....	.....	.....	.....	.....	.....	0.98	-0.86	0.75	2.5	3	.....	.....	.....	.....	J. C. Jewett
Steffenville.....	Lewis.....	650	39	28.0	-1.7	55	20	1	10	35	1.34	-0.43	0.85	4.0	5	12	6	10	n.	Frank Hall
Tarkio.....	Atchison.....	916	34	24.0	-5.0	47	18	-2	1	37	0.62	-0.66	0.37	9.5	6	14	7	7	nw.	Albert Volker
Trenton.....	Grundy.....	822	41	26.5	-2.9	52	18	2	10	32	1.12	-0.46	0.82	1.6	6	10	10	8	s.	W. H. Estes
Unionville.....	Putnam.....	1,062	44	21.8	-4.9	48	12	-1	1†	38	1.35	-0.42	.....	1.8	4	13	4	11	n.	John H. Schick
Warrenton.....	Warren.....	816	55	32.2	+1.3	63	8	-1	2	39	1.90	+0.01	0.64	4.2	6	6	11	11	nw.	Prof. A. W. Ebeling
Keokuk, Iowa.....	Lee, Ia.....	574	66	27.8	-0.5	60	8	1	10	47	1.51	-0.04	1.21	3.6	7	12	3	13	nw.	U. S. Weather Bureau
Division means and extremes				27.8	-2.3	65	7	-15	2	48	1.20	-0.41	1.87	4.3	5	11	7	10	nw.	
Southwestern Division																				
Appleton City.....	St. Clair.....	853	42	32.0	-1.9	64	7	-2	2	38	1.89	+0.22	1.09	7.0	6	16	2	10	sw.	Rolla Brown
Buffalo.....	Dallas.....	1,200	7	.....	.....	.....	.....	.....	.....	.....	1.05	.....	0.59	1.5	7	14	8	6	.....	C. M. McCallister
Caplinger Mills.....	Cedar.....	750	11	.....	.....	.....	.....	.....	.....	.....	1.74	+0.43	0.70	5.8	5	6	7	15	nw.	Ozark Utilities Co.
Clinton.....	Henry.....	765	44	32.2	-1.4	62	7	-6	2	40	2.32	+0.37	1.29	11.5	6	6	10	12	nw.	A. E. Derwent, M. D.
Concordia.....	Lafayette.....	784	22	.....	.....	.....	.....	.....	.....	.....	2.09	+0.61	1.53	5.3	7	11	5	12	nw.	Miss Ora Stratman
Dean.....	McDonald.....	1,000	33	37.2 <sup>a</sup>	+1.5	72	7	11	2	43	0.38	-1.40	0.18	.....	3	10 <sup>a</sup>	4 <sup>a</sup>	13 <sup>a</sup>	w.	E. S. Taylor
Eldon.....	Miller.....	934	42	31.4	-1.7	65	7	-5	3	44	0.73	-1.09	0.17	4.0	8	11	9	8	nw.	E. H. Shepherd
Garber.....	Taney.....	950	2	37.2	.....	74	7	9	2†	44	1.60	.....	0.75	0.2	3	6	4	18	e.	William H. Durham
Hailey.....	Barry.....	1,350	12	.....	.....	.....	.....	.....	.....	.....	1.70	-0.10	1.00	4.3	5	13	12	3	se.	A. W. Madison
Harrisonville.....	Cass.....	904	59	27.2	-3.5	60	7	0	2	41	1.46	-0.27	0.92	8.0	5	8	7	13	nw.	John H. Patterson
Jefferson City.....	Cole.....	557	47	29.3	-2.8	61	7	-7	2†	45	1.55	-0.21	0.58	7.5	9	7	15	6	se.	Mrs. Frank Kliegel
Lamar.....	Barton.....	980	49	33.8	-1.5	69	7	6	2	41	1.27	-0.50	0.90	2.0	4	11	8	9	sw.	Jesse A. Mann
LaMonte.....	Pettis.....	867	36	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. E. Wheeler
Lebanon.....	Laclede.....	1,265	49	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lexington.....	Lafayette.....	688	52	28.8	-2.2	56	7	6	2†	39	1.35	-0.49	0.90	9.0	7	15	8	5	w.	Miss Carrie Loomis
Lockwood.....	Dade.....	1,078	31	37.0	0.0	68	7	10	2	41	1.42	-0.31	0.70	3.5	6	13	8	7	sw.	Hubert A. Nieman
Marshall.....	Saline.....	779	50	31.4	+0.5	60	7	2	2	40	1.59	-0.19	1.09	3.0	6	22	2	4	sw.	Sec. Chamber of Commerce
Mountain Grove.....	Wright.....	1,463	36	35.3	+0.2	67	8	6	2	46	1.54	-0.69	0.51	1.0	7	11	11	6	nw.	Mo. Fruit Exp. Sta.
Neosho.....	Newton.....	1,011	50	38.5	+0.9	71	7	10	2	45	1.63	-0.36	0.90	0.5	6	16	8	4	nw.	U. S. Fisheries Sta.
Nevada.....	Vernon.....	862	44	35.2	+1.3	68	7	1	2	43	1.74 <sup>a</sup>	-0.11	0.92	5.5	5	12	2	14	sw	T. J. Kaup
Seligman.....	Barry.....	1,542	36	37.1 <sup>a</sup>	-0.4	70	7	9	2	42	1.58	-0.26	0.65	1.0	6	15	6 <sup>a</sup>	6 <sup>a</sup>	w.	Floyd E. Fawver
Seymour (near).....	Webster.....	1,642	31	34.8	-0.2	65	7	2	41	2.80	+0.62	1.16	2.0	7	7	10	7	11	nw.	A. L. Hailey
Springfield.....	Greene.....	1,301	49	34.6	-0.6	70	7	9	2	50	1.15	-1.20	0.49	2.4	6	8	11	9	se.	U. S. Weather Bureau
Versailles.....	Morgan.....	1,037	5	33.4	.....	66	8	-6	2	45	1.03	-0.54	0.29	4.6	7	10	5	13	nw.	T. M. Wilson
Warrensburg.....	Johnson.....	878	50	31.2	-1.3	60	8	-7	2	42	1.98	+0.10	1.06	6.0	6	8	8	12	sw.	E. A. Markey
Warsaw.....	Benton.....	687	36	33.6	-2.0	68	8	-8	2	47	1.48	-0.76	0.76	5.5	7	11	11	6	n.	Everett Martin
Division means and extremes				33.6	-0.8	74	7	-8	2	50	1.46	-0.46	1.70	4.2	6	11	8	9	nw.	
Southeastern Division																				
Arcadia.....	Iron.....	926	56	32.6	-1.5	65	7†	9	2	49	1.08	-1.40	0.36	2.0	5	14	6	8	n.	Arcadia College
Birch Tree (near).....	Shannon.....	1,000	42	36.6	+0.3	67	8	9	2	39	1.75	-0.75	0.86	2.0	5	15	5	8	n.	V. H. Kirkendall
Campbell.....</																				



Daily Precipitation for February 1937

		Daily Precipitation for February 1937																																	
Stations	Drainage-basins	Day of month																												Total					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28		..	..	..		
Northern Division																																			
Amity	Grand				T.				T.								T.	.02	.03		.05	1.13												1.33	
Bethany	do			T.				T.									T.		.08		.06	.72						T.	.10	T.				0.78	
Bowling Green	Mississippi	.30								.14																								0.67	
Brunswick	Grand									.12																								1.74	
Canton	Mississippi				.01						.02							.05																1.47	
Chillicothe	Grand				T.			T.	T.																									0.87	
Clifton Hill	Chariton								.05													.27	.60											1.45	
Columbia**	Missouri	.28		**					.05													1.05	.15	T.			T.							0.87	
Conception	do																					.05	.11	.07	T.									1.45	
Dawning	Mississippi			.05				T.	.05	T.												.04	1.87	.27			T.							0.6	
Elderton	Missouri			T.				T.											.08		.10	.05	.70	1.40										2.33	
Edina	Mississippi							T.												.21		.57	T.											2.33	
Elser	do	.41			T.																	.09			1.33									1.05	
Farber	do	.20			T.				.06	.07									.05		.08	.10	.04	.70				T.	T.					1.58	
Fayette	Missouri	.06			T.				.05												.04	.03	.12											1.90	
Fulton	do	.40			T.				.03	.02												.13	.85	.10										0.62	
Gallatin II	Grand								.02													.08	.12	.12										1.23	
Gorin	Mississippi	.10			T.				.05															.95										0.90	
Grant City	Grand				.02																	.08	.12	.12										1.02	
Hannibal	Mississippi				T.	T.															.01	.01	.60	T.			T.							1.60	
Hermann	Missouri	.40	T.								.29											.13	.13	.03										0.64	
Kahoka	Mississippi																					.03	.33											0.59	
Kansas City**	Missouri	T.		T.						.02	T.											.05			1.30				T.						1.15
Kidder	Grand								.02	T.												.01	.70	.05										1.60	
King City	Missouri																					.02	.86											0.86	
Kirkville	Mississippi				.10																	.01	.49	.08										0.94	
La Belle	do								.10													.20	1.28	.80										0.67	
Linneus	Grand							T.	.10													.12	1.17	.28			T.							2.62	
Louisiana	Mississippi	.35							.17	.05												.13												1.82	
Lucerne	Grand				.02																		.11	.25										1.27	
Macon	Chariton				.01																				1.12	.04	.15							0.78	
Madison	Mississippi				.05					.10													.08											1.46	
Maryville	Missouri																																	0.99	
Memphis	Mississippi			.02																			.17	.28	.08									0.71	
Mexico	do				T.					T.	T.											.02	.60	.20										0.91	
Milan	do								.09	.05													.15	1.10	.25									1.57	
Moberly	Grand				.05																	.03	.13	.52										0.90	
Monroe City	Mississippi	.02		.02					.07														.12	.08	1.48									1.82	
New London	do								.04													.04	.03	1.07	.19	T.								1.50	
Oregon	Missouri		T.	.05					.16	.24													.08	.12	.48	.04								0.79	
Palmyra	Mississippi																						.19	.11	.02									1.06	
Paris	do				T.				.31																	1.00	.05	.02						1.14	
Perry	do								.04														.32	.05										0.73	
Philadelphia	do	T.																				.05			.04	.45								0.62	
St. Charles	do				T.																		.07	.25	.25									0.49	
St. Joseph**	Missouri	.01			T.						.55												.12	1.41	.05									1.62	
Shelbina	do								T.	T.	T.												.02	.53	T.									1.15	
Shelbyville	Mississippi								T.														.06	.69	.03	T.								0.89	
Steffenville	do																							.20	.75									0.98	
Tarkio	do																						.15	.97										1.12	
Trenton	Missouri																						.20	.85	.15	T.								1.34	
Troy	Grand				.04																		.07											1.34	
Unionville	Mississippi	.07	.01						.02														.10	.20	.17									0.62	
Warrenton	Chariton									.33													.06	.82	.16									1.12	
Keokuk, Ia. **	Mississippi	.20			**						.64												.20	.14	.49									1.41	
do	do			.02					T.	T.													**	1.35										1.35	
do	do																						.42	T.	.39	T.								1.90	
do	do																						.08	1.02	.23									1.61	
Southwestern Division																																			
Appleton City	Osage	.14		T.					.33																									1.89	
Boonville	Missouri	.30			.01				T.	.07													.05	1.09	.12	T.	T.							1.47	
Buffalo	Osage	.13							.15	T.													.01	.89										1.05	
Caplinger Mills	do	.30							.70														.15	.14	.45									1.74	
Clinton	do	.30		.20					.25														.58	.03										2.32	
Concordia	Missouri	.16								.15													.10	.29										2.19	
Dean	Neosho	.18		T.					.18														.02	**	1.53									0.38	
Eldon	Missouri	.03							.08	.17													.02											0.73	
Galena	White								.32														.07	.11	.14									1.10	
Garber	do	T.							.29														.19	.17	.42									0.73	
Halley	do	.05																					.75	.46	T.									1.50	
Harrisonville	Osage	.25							.08														.10	1.00	.30									1.70	
Jefferson City	Missouri	.58	.03		.12					.22														.92										1.46	
Joplin	Neosho	.07							.06														.06	.14	.25	T.								1.55	
Lakeside	Osage																																		



## Daily Precipitation for February 1937—Continued from preceding page

Stations	Drainage-basins	Day of month																															Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	..	..	..	
Southeastern Div.—Concluded																																	
Cape Girardeau	Mississippi							T.	.02	.63				T.	.67		T.	T.	.01		.14	.01			T.				.14			1.62	
Caruthersville	do								.65					.95							.02											1.62	
Centerville	Black	T.	T.						.53					.02							.04	.39	.43	.01	T.			T.	.17			1.59	
Crystal City	Mississippi		T.		T.				.76								T.					.63		.03					.06			1.48	
Cuba	Meramec	.02							.62													1.00										1.64	
Dexter	St. Francis								.60					.80					T.		.30								.69			2.39	
Doniphan	Black	T.						T.	.35					.25						.60	.11	.11			T.			.18	T.			1.00	
Farmington	St. Francis	T.						T.	.42								T.	T.			.02	.33	T.	T.				.15	.03			0.95	
Fisk	do							.02		.76				.06	.47						.47	.17							.61			2.56	
Fredericktown	do								.08	.76				.22					T.		.08	.53							.13			1.80	
Goodland	Black							T.	.42												.05	.05	.30	.09	T.			.11				1.02	
Greenville	St. Francis								.08					.09							.08	.06						.08				0.39	
Jackson	Mississippi							.01	.60					.52			T.	.04			.02	.14	.04					.24	T.			1.61	
Koshkonong	Black								.18											1.24	.17	.33						.14				2.06	
Leeper	do								.33						.20						.20	.73							.15			1.61	
Licking (near)	Gasconade	.04		T.					.60												.23	.54	T.	T.				.20	T.			1.61	
Marble Hill	Mis-issipi								.65					.38							.05	.08	.28					.30				1.74	
Meramec Park	Meramec	.03							.05	.45											.15		.51					.06	.03			1.28	
Morehouse	Mississippi								.50					.53					T.	T.	.08	.12						.18	T.			1.41	
New Madrid	do						.10	.04	.29						.30				.12		.05		T.						.25			1.15	
Owensville	Gasconade	.03	.03						.74								T.				.08	T.	.34						.05	T.		1.27	
Parma	St. Francis								.22					.40															.24			0.86	
Poplar Bluff	Black								.80					.38								.48	.14						.36			2.16	
Richwoods	Meramec																T.				.23	.77						.03	.10				
Rolla	do	.05	.03		T.	T.			.01	.45										T.	.10	.01	.45	T.	.08	T.	T.	T.	.04			1.34	
St. Louis***	Mississippi	T.		T.	T.	T.		.01	.45					T.		.01	.01	.07	T.	T.	.87	.03	T.		T.	T.		.06	.01			1.52	
St. Louis University*	do	.01		T.				.01	.60							.03		.02			T.	.66	.01			T.		.11	T.			1.45	
Salem	Meramec	.10							.43												.25	T.	.60	.09					.14			1.61	
Sikeston	Mississippi								.02	.70					.55						.02		.10	.03					.02			1.44	
Union	Meramec	T.	T.						.55											T.	.05	.02	.62					.03	.06			1.43	
Valley Park	do	T.	T.		T.				.42											.04	T.	.53	T.					.02	.10			1.11	
Van Buren	Black	T.						T.	.25					.20							.70	.40										1.55	
Williamsville	do								.03	.30					.17							.45	.16						.20			1.31	
Willow Sprgs. (near)	White	.01							.24						.10					.02		.30	.68						.12			1.47	
Zalna	Mississippi								.76						.39							.28	.20						.20			1.83	
Cairo, Ill.***	do							.07	.46					.58		T.	T.	.09		.07	.01	.02		T.		T.		.27	T.			1.57	

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. || Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. T. Trace, or less than 0.01 inch.  
 \*\*\* Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. \*\* Precipitation in the next following measurement; separate dates of fall not recorded. \* Precipitation is for 24-hour period, midnight to midnight † Estimated. ‡ Partially estimated. ||||| Incomplete.

## Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for February 1937

(See precipitation data in table on preceding page)

Station	Data	Day of month																														Monthly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	..	..	
Lakeside (Osage Dam)	Evaporation .....														.180	.086	....	.154	.056	.147	†††	.061	.091	.022	.041	....	....	....	....	....	....	....
	Mean temperature ..	19	12	16	21	32	27	48	34	25	24	32	46	48	42	40	36	36	42	40	52	32	32	33	33	22	26	26	28	..	..	32.4
	Wind movement ..	88	71	98	121	95	99	97	134	104	119	68	94	130	157	74	152	73	120	100	94	145	96	52	98	155	82	61	109	..	..	2,886

Observations taken at 7.30 a. m. Wind movement corrected to true velocities. For description see April 1932 report.

\*\*\* Evaporation included in next measurement. †††—0.02.

Continued from page 6

Sleet.—1st, 3d, 7th, 8th, 13th, 20th, 21st, 27th.

Thunderstorms.—Local, 19th, 21st; more or less general, 8th, 20th.

Tornadoes.—8th, 20th. (See special tornado report.)

Windstorms.—15th, 19th, 20th, 21st. No damage reported except some minor damage at St. Louis and in St. Louis County on 21st.

## TORNADOES

On February 8th, about 1 p. m., a small tornado struck the village of Fagus, Butler County, injuring six persons and doing damage to property estimated at \$4,000. A funnel-shaped cloud was reported and the width of the path of the tornado was two hundred yards. Few buildings in the town escaped damage.

On Saturday February 20th, between 4 and 5 p. m., a series of three destructive tornadoes swept portions of Greene, Chris-

tian, Webster, Wright, and Douglas counties in southwestern Missouri, causing property damage of at least \$200,000 and injury to at least thirteen persons, two critically, and killed numerous livestock and poultry.

The paths of the tornadoes were about ten miles apart and ran parallel in an almost southwest to northeast direction, and were from 1000 feet to one quarter mile wide and from ten to thirty miles long. Moderate hail fell over nearly all the stricken area.

A total of 55 homes were damaged or destroyed, together with as many, or more, barns, garages and outbuildings. Trees, telephone and telegraph poles and wires were blown down or broken. An apple orchard of approximately 1000 fine trees, near Seymour, was badly damaged. Eye witnesses reported well defined funnel-shaped or twisting clouds in the sections visited by the tornadoes. (Extract of notes and clippings furnished by O. I. C., Springfield, Mo.)

## ERRATA

January 1937, page 5; maximum temperature at Cairo, Ill., on the 24th should be 34.



## Daily Temperatures for February 1937

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	Mean		
Northern Division																															
Brunswick §§	Maximum...	18	25	32	21	43	27	60	34	23	30	49	54	55	41	50	36	45	53	52	46	32	30	39	31	26	31	29	29	37.2	
	Minimum...	10	9	9	9	9	14	21	26	11	5	7	27	38	30	29	20	21	28	28	39	22	22	19	26	12	12	17	23	19.4	
Chillicothe §§	Maximum...	20	26	31	22	42	27	55	22	23	34	45	48	41	40	37	40	42	53	46	35	32	34	35	30	27	34	29	32	35.1	
	Minimum...	4	4	6	4	5	14	11	6	2	7	24	36	26	28	16	18	27	30	33	23	25	27	23	9	12	18	21	21	16.9	
Columbia	Maximum...	21	25	34	21	46	42	60	61	27	33	53	56	49	43	45	36	47	57	52	60	36	34	39	35	25	35	30	30	40.4	
	Minimum...	5	9	21	9	11	23	24	18	14	7	30	42	33	29	26	22	31	30	43	36	24	26	24	19	13	18	24	24	22.0	
Fayette	Maximum...	19	23	34	31	45	42	64	58	23	32	51	56	49	43	40	39	47	56	52	53	53	31	37	34	26	32	34	29	40.4	
	Minimum...	11	4	17	8	6	24	21	18	9	2	25	36	35	29	33	21	27	38	40	23	23	20	26	10	17	23	23	23	39.8	
Grant City	Maximum...	18	24	27	18	36	36	33	34	14	34	40	42	41	35	36	36	40	49	44	40	31	27	34	29	24	30	27	30	20.8	
	Minimum...	1	4	16	2	6	10	12	11	4	0	22	35	31	23	24	14	30	28	40	30	19	10	15	20	7	8	17	18	32.5	
Hannibal	Maximum...	19	27	33	31	38	39	34	48	24	28	47	55	50	40	41	33	42	53	47	53	54	30	38	30	27	33	29	31	16.2	
	Minimum...	10	5	18	8	11	20	19	20	10	1	24	39	34	27	30	19	25	30	35	46	26	19	19	23	10	15	22	23	37.0	
Kansas City	Maximum...	20	26	33	24	47	40	61	52	23	37	50	51	47	47	45	44	48	56	52	41	35	37	38	35	25	29	29	33	37.0	
	Minimum...	10	11	14	9	18	20	25	16	12	9	32	41	36	30	27	23	35	33	41	29	24	26	28	20	12	20	22	17	39.5	
Kidder §§	Maximum...	20	26	29	23	41	25	48	20	17	34	42	45	41	38	37	36	41	52	45	35	31	28	35	26	23	30	22	17	22.8	
	Minimum...	2	4	5	4	4	14	14	17	6	2	5	26	36	24	26	16	11	28	29	31	18	16	18	21	6	7	10	17	33.1	
Kirksville	Maximum...	17	26	30	28	36	41	32	50	22	27	41	46	43	38	39	35	41	50	46	44	36	27	34	31	24	32	29	29	14.9	
	Minimum...	4	3	12	5	8	14	14	16	6	1	23	32	33	24	28	16	26	26	32	34	18	17	14	21	9	12	19	22	34.8	
Louisiana	Maximum...	20	28	32	32	38	32	39	54	27	30	48	51	50	48	42	36	40	55	50	50	54	35	38	35	30	30	30	30	38.8	
	Minimum...	10	9	16	9	5	17	27	22	14	4	21	40	36	29	35	21	23	30	35	40	25	26	22	27	12	17	23	23	22.1	
Macon §§	Maximum...	19	26	34	19	43	25	59	26	22	31	45	53	44	41	40	36	45	53	48	49	30	35	29	26	33	29	29	29	35.7	
	Minimum...	8	6	9	6	6	13	11	23	9	2	5	29	40	26	29	17	19	28	33	38	20	18	16	21	8	11	19	21	17.5	
Maryville	Maximum...	13	24	25	14	39	36	32	32	13	35	43	33	39	36	35	38	41	50	43	37	32	29	33	30	30	32	31	28	31	32.3
	Minimum...	1	6	12	2	8	11	14	10	4	0	23	34	29	22	23	15	32	27	35	29	17	14	17	18	6	8	17	13	21.0	
Mexico §§	Maximum...	22	25	37	29	45	30	58	39	32	37	52	58	51	45	48	38	47	58	51	55	33	37	40	42	30	39	33	33	16.0	
	Minimum...	10	9	8	8	7	11	20	25	12	3	7	30	38	27	29	20	20	28	30	40	23	24	21	25	11	10	17	23	40.9	
Moberly	Maximum...	19	23	33	30	44	38	47	59	23	28	48	54	47	40	41	34	45	53	49	52	52	30	35	31	25	31	29	29	17.9	
	Minimum...	10	6	18	7	9	20	19	15	10	3	26	38	33	28	29	19	25	29	36	41	22	23	20	21	10	15	23	23	38.2	
Oregon	Maximum...	23	23	28	18	40	39	38	37	18	36	46	47	45	40	42	43	52	50	39	36	31	32	23	20	21	10	15	23	20.6	
	Minimum...	0	8	15	4	12	12	17	11	7	3	27	37	34	25	25	18	32	30	37	29	18	17	20	22	7	10	19	10	35.6	
St. Joseph	Maximum...	17	25	31	20	43	33	41	33	19	38	48	49	44	43	42	42	45	54	47	36	35	30	36	31	24	28	28	32	18.1	
	Minimum...	4	11	10	6	16	15	19	13	8	7	29	40	33	28	25	21	33	32	36	26	22	21	24	14	10	16	21	15	35.5	
Trenton	Maximum...	16	26	30	28	39	34	40	30	18	34	43	46	43	38	38	35	36	41	52	46	38	32	29	34	30	24	31	29	31	19.8
	Minimum...	4	4	19	5	19	16	15	14	7	2	25	35	32	25	26	16	28	29	36	32	20	18	24	20	8	13	19	21	34.0	
Unionville §§	Maximum...	10	22	25	20	31	21	36	22	18	33	41	48	46	34	37	32	40	38	42	41	38	35	34	26	24	30	29	29	19.0	
	Minimum...	1	0	0	3	8	8	11	19	4	1	3	26	27	33	13	12	9	2	21	35	23	22	14	15	6	10	19	21	31.5	
Warrenton	Maximum...	21	26	36	35	43	40	44	63	27	30	53	56	52	44	46	36	44	56	53	57	54	40	39	36	28	37	35	30	41.5	
	Minimum...	11	1	17	9	11	28	22	24	15	6	25	40	41	29	35	21	24	30	40	46	25	26	22	25	12	17	23	22	28.0	
Southwestern Division																															
Appleton City	Maximum...	20	31	39	33	52	41	64	54	32	33	49	56	48	46	45	43	50	56	56	52	38	38	42	41	27	29	31	33	42.1	
	Minimum...	9	2	20	10	14	26	26	19	13	7	26	36	36	31	22	24	29	27	38	34	24	26	27	24	15	20	21	10	21.9	
Clinton	Maximum...	20	30	33	33	50	45	62	60	30	30	45	50	48	50	47	46	50	50	50	47	38	40	41	42	32	30	28	32	41.1	
	Minimum...	10	6	16	10	11	28	26	20	10	6	28	38	37	28	36	36	32	27	38	38	23	27	26	32	13	20	23	23	23.4	
Eldon §§	Maximum...	23	29	36	26	49	41	65	39	31	50	53	56	51	50	44	41	50	58	52	59	35	43	40	40	28	33	33	29	42.3	
	Minimum...	14	3	5	9	9	12	25	30	17	9	9	23	43	29	29	24	23	29	30	43	25	26	25	29	14	14	19	21	20.4	
Garber	Maximum...	36	30	41	39	58	54	74	70	42	42	59	58	55	57	54	50	55	62	55	65	49	61	53	45	40	34	34	36	50.3	
	Minimum...	12	9	9	17	15	31																								







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# CLIMATOLOGICAL DATA

19

## MISSOURI SECTION

ROSCOE NUNN  
ST. LOUIS, MO.

VOL. XLI

MARCH 1937

No. 3

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR

### GENERAL SUMMARY

The first week of March was quite mild and spring-like, but a sharp change to colder occurred about the 9th and there was but little recovery from winter-like conditions thereafter. The last week was especially cold, with freezing every night in most parts of the State. The average temperature for the month was the lowest for March since 1932.

Precipitation was unusually light for this time of year; nevertheless, the ground surface kept wet and unsuitable for plowing and preparation for planting, due largely to frequent freezing and thawing. The precipitation for the State averaged much less than normal, but it was considerably more than was received in March 1936. It was fairly well distributed over the State and through the month, with principal precipitation periods about the 3d-4th, 12-13th, 19-20th, and 23d-24th. A prominent feature of the month's precipitation was the heavy snowfall on the 12-13th over a wide west-east belt across the central portion of the State, when the fall amounted to as much as 12 inches at several stations and as much as 14 inches at Warrensburg and Fulton. The snowfall was only light or moderate in the northern fourth and the southern third of the State.

These conditions were beneficial in retarding the development of fruit buds, but they seriously delayed sowing of oats, potato planting, plowing, and making of early gardens. Wheat and other winter grains and grasses were unusually backward at the end of March.

The month was unusually free from windstorms. River stages were generally near normal in the Missouri River and somewhat above normal in the Mississippi.

### TEMPERATURE

The monthly mean temperature for the State, 71 stations reporting, was 40.4°, or 3.4° below normal. The highest monthly mean was 45.2° at Caruthersville, and the lowest monthly mean was 35.2° at Unionville. The highest temperature recorded was 77° at Mexico on the 7th, and the lowest was 6° at Crystal City on the 16th. The greatest daily range was 46° at Goodland on the 2d.

### PRECIPITATION

The average precipitation for the State, 130 stations reporting, was 1.66 inches, or 1.57 inches less than normal. The greatest local monthly amount was 3.92 inches at Harrisonville, and the least local monthly amount was 0.54 inch at Palmyra. The greatest amount in any twenty-four hours was 1.57 inches at Rolla on the 13th. The average number of days with 0.01 inch or more of precipitation was 6. The snowfall averaged 2.8 inches, or 0.3 inch less than normal. The greatest monthly snowfall was 14.0 inches at Fulton and Warrensburg.

### MISCELLANEOUS PHENOMENA

Dust.—19th, 20th, 21st, 22d, 24th, 25th, 26th, 27th, 28th, 29th.

Earthquake.—Felt at St. Louis and St. Louis County on 8th.

Flood.—In upper reach of Grand River 4-7th.

Fog.—Dense, 4th, 5th, 21st.

Frost.—Killing frosts or freezing temperatures general throughout the month.

Glaze.—13th.

Hail.—Light, 11th at Springfield, 19th at Amity, Springfield, and Versailles, 24th at Dean.

Halos.—Solar, 2d, 3d, 6th, 7th, 9th, 12th, 14th, 17th, 21st, 22d, 23d, 27th, 29th, 30th, 31st; lunar, 21st, 22d.

Sleet.—8th, 11th, 12th, 13th, 14th, 19th, 20th.

Smoke.—Dense, 2d, 16th, 21st, 22d, 29th.

(Continued on page 14)

### PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind				Relative humidity			Percentage of sunshine
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12 noon	6:30 p. m.	
Columbia.....	30.11	30.42	15	29.29	24	8.6	27	n.	25	82	59	62	54
Kansas City.....	30.11	30.48	15	29.20	24	10.1	36	sw.	24	78	57	63	60
St. Joseph.....	30.11	30.47	26	29.20	24	9.0	27	n.	24	76	58	64	48
St. Louis.....	30.10	30.40	26	29.35	24	11.5	32	sw.	24	76	56	54	51
Springfield.....	30.08	30.40	28	29.36	24	10.7	38	sw	24	76	59	57	57
Cairo, Ill.....	30.10	30.36	26	29.44	24	10.7	29	sw.	24	81	62	63	62
Keokuk, Iowa..	30.13	30.49	26	29.36	24	8.3	23	n.	25	76	51	58	59

### COMPARATIVE DATA FOR MARCH

Year	Temperature			Precipitation						Number of days			
	Average for State	Highest	Lowest	Average for State	Average Northern Division	Average Southwestern Division	Average Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy	
1888.....	38.5	90	1	3.90	4.13	4.37	3.19	....	10	..	..	..	
1889.....	44.3	84	13	2.22	1.26	3.37	2.02	....	5	..	..	..	
1890.....	37.3	79	-11	3.51	2.00	2.40	6.12	5.7	8	..	..	..	
1891.....	36.6	78	-11	2.66	3.03	2.26	2.68	7.1	10	..	..	..	
1892.....	38.9	87	5	2.98	3.31	3.46	2.18	....	8	8	10	13	
1893.....	40.5	86	0	2.92	2.49	2.71	3.57	3.2	7	11	10	10	
1894.....	47.7	89	2	3.22	2.29	2.95	4.43	0.2	6	15	9	7	
1895.....	42.4	98	0	2.36	1.49	2.89	3.21	4.4	9	14	7	10	
1896.....	39.2	82	-2	2.22	1.15	2.04	3.47	5.2	8	11	9	11	
1897.....	44.2	82	-5	6.73	4.38	5.62	10.18	1.0	12	9	9	13	
1898.....	44.7	83	-9	7.44	5.26	6.42	10.63	0.6	11	11	7	13	
1899.....	37.4	78	-8	2.92	3.19	2.34	3.23	8.9	10	9	11	11	
1900.....	40.4	88	-4	1.52	1.43	1.35	1.79	0.2	6	15	9	7	
1901.....	42.7	85	-1	3.77	3.33	4.21	3.77	1.8	8	11	8	12	
1902.....	45.3	85	1	3.71	2.50	4.64	3.99	0.8	9	10	10	11	
1903.....	46.8	81	9	3.62	2.34	4.17	4.34	1.1	8	13	7	11	
1904.....	44.8	87	8	4.55	3.54	3.13	6.98	1.2	9	11	9	11	
1905.....	50.3	88	10	3.15	2.27	3.36	3.83	T.	8	11	8	12	
1906.....	34.6	75	-5	3.98	2.63	3.12	6.18	8.6	11	6	7	18	
1907.....	53.9	95	16	2.76	2.54	3.05	2.70	1.0	7	14	7	10	
1908.....	50.1	89	14	2.98	1.38	3.33	4.22	1.0	7	14	7	10	
1909.....	44.5	81	9	3.03	2.24	2.01	4.83	0.6	6	13	9	9	
1910.....	55.8	96	15	0.77	0.26	1.00	1.05	0.1	2	20	7	4	
1911.....	46.8	91	5	1.72	1.71	1.84	1.62	1.4	6	16	8	7	
1912.....	35.2	89	-4	4.69	3.69	5.25	5.12	16.5	11	12	6	13	
1913.....	40.6	84	-12	4.64	3.44	4.52	5.95	5.0	9	12	8	11	
1914.....	43.2	87	-2	2.76	2.80	2.89	2.59	4.7	8	13	7	11	
1915.....	36.4	70	-6	1.45	1.20	2.01	1.15	7.9	6	7	8	16	
1916.....	47.0	95	-2	2.55	2.48	3.20	1.98	3.1	7	14	8	9	
1917.....	45.2	86	-7	2.69	2.70	2.80	2.57	1.5	7	15	7	9	
1918.....	50.9	95	8	1.02	0.46	1.55	1.06	0.1	4	18	6	7	
1919.....	46.3	90	-2	2.40	2.27	1.44	3.49	0.7	6	15	8	8	
1920.....	44.6	86	-6	5.12	4.60	5.37	5.40	1.4	8	15	6	10	
1921.....	51.9	90	11	5.06	3.52	5.32	6.34	0.5	10	13	9	9	
1922.....	45.6	80	3	6.39	4.89	6.78	7.51	2.2	12	11	6	14	
1923.....	40.4	83	-11	4.23	3.53	3.64	5.52	2.3	8	14	6	11	
1924.....	38.4	80	8	2.54	2.52	2.40	2.71	9.4	8	8	8	15	
1925.....	47.7	86	-5	1.94	1.77	1.98	2.07	0.8	5	17	8	6	
1926.....	39.6	83	8	2.87	2.15	2.82	3.63	7.0	8	13	6	12	
1927.....	45.9	80	0	5.93	4.08	6.88	6.83	3.7	11	12	8	11	
1928.....	46.3	89	10	1.61	1.00	1.58	2.24	2.4	5	15	9	7	
1929.....	48.6	97	11	3.33	2.99	3.13	3.88	7.7	8	12	8	11	
1930.....	43.2	80	6	1.38	1.19	0.91	2.04	1.4	4	18	6	7	
1931.....	39.5	70	10	3.18	2.57	3.05	3.91	8.8	8	11	7	13	
1932.....	38.3	81	-2	1.99	1.39	1.62	2.96	2.8	7	12	9	10	
1933.....	44.1	87	5	3.61	3.05	2.79	4.99	2.0	10	11	8	12	
1934.....	41.2	82	-3	2.55	1.53	2.10	4.03	4.9	7	13	8	10	
1935.....	50.4	87	8	5.76	2.46	5.10	9.73	0.7	9	10	10	11	
1936.....	49.4	84	18	1.27	0.82	1.00	1.98	T.	5	16	9	6	
1937.....	40.4	77	6	1.66	1.27	2.15	1.56	2.8	6	12	8	11	
Period.....	43.8	98	-12	3.23	2.49	3.16	4.03	3.1	8	13	8	10	



## Climatological Data for March 1937

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches				Number of days				Prevailing direction of wind	Observers		
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelted	With precip., .01 inch or more	Clear	Partly cloudy			Cloudy	
Northern Division																					
Bethany	Harrison	916	42	37.8	-2.5	70	6	18	27	39	1.36	-0.87	0.50	T.	7	12	11	8	nw.	A. S. Cumming	
Brunswick	Chariton	652	56	38.0	-3.9	70	6†	18	16†	38	1.71	-0.99	0.76	3.5	6	14	3	14	nw.	O. K. Bencke	
Chillicothe	Livingston	779	28	38.0	-3.7	71	6	20	1†	38	1.32	-1.16	0.54	0.7	8	19	6	6	nw.	Wm. J. Olchhouse	
Clifton Hill	Randolph	731	38	39.0	-3.2	69	7	15	14	30	1.31	-1.43	0.38	4.0	6	9	9	13	sw.	Dr. A. J. Bradsher	
Columbia	Boone	740	47	39.4	-3.2	68	7	14	15	29	2.07	-0.87	1.03	12.8	9	9	8	14	n.	U. S. Weather Bureau	
Conception	Nodaway	980	48	37.2	-2.6	67	6	15	27	32	1.79	+0.14	0.68	T.	6	4	13	14	nw.	Fr. Adelhelm Hess	
Downing	Schuyler	876	16	37.4	-4.2	71	6	11	27	34	1.05	-1.11	0.65	1.0	3	2	13	16	s.	Everett Rowe	
Edgerton	Platte	856	17	38.8	-4.4	70	6†	18	1	36	1.57	-0.69	0.66	4.7	8	15	0	16	n.	Fred L. Stiff	
Elsberry	Lincoln	449	6	39.6	.....	71	6	11	15	41	0.94	.....	0.49	6.0	5	12	10	9	n	Ray E. Mills	
Fayette	Howard	680	57	39.2	-2.7	70	7	11	16	38	1.67	-1.15	0.62	8.5	5	9	9	13	s.	Harry P. Mason	
Fulton	Callaway	818	49	39.2	-4.9	69	6†	9	16	36	1.90	-1.06	0.70	14.0	7	11	5	15	ne.	Clyde C. Herring	
Gorin	Scotland	700	50	.....	.....	72	7	15	1†	38	1.32	-1.04	0.57	1.9	7	8	18	5	nw.	W. L. Harker	
Grant City	Worth	1,134	33	37.0	-4.3	72	7	15	1†	38	1.32	-0.69	0.42	T.	7	6	8	17	se.	Howard Rybolt	
Hannibal	Marion	759	45	39.0	-2.0	68	6†	19	9†	34	0.83	-1.77	0.20	3.3	7	7	7	17	n.	Hannibal Water Dept.	
Kansas City	Jackson	741	48	39.8	-2.9	70	7	21	15	31	1.73	-0.80	1.20	4.2	9	3	13	15	sw.	U. S. Weather Bureau	
Kidder	Caldwell	1,020	45	36.0	-4.8	67	6	17	1†	37	1.32	-0.87	0.83	1.2	8	8	12	11	n.	Roscoe L. Terry	
King City	Gentry	1,095	11	.....	.....	71	7	14	1	37	0.74	-1.00	0.50	1.8	10	5	14	12	nw.	John M. Martin	
Kirkville	Adair	969	48	36.8	-2.9	71	7	14	1	37	0.74	-2.20	0.59	T.	2	7	13	11	nw.	Charles Noble	
Linn	Linn	816	5	.....	.....	72	7	15	1†	38	1.32	.....	0.55	T.	4	11	10	10	nw.	H. D. Taggart	
Louisiana	Pike	469	43	38.7	-4.8	68	7	15	16	38	0.86	-2.61	0.27	4.0	6	20	5	6	w.	Stark Bro's Nurseries	
Macon	Macon	875	38	37.1	-5.1	72	7	18	1†	38	0.88	-1.96	0.38	T.	5	15	10	6	w.	C. S. Brown	
Maryville	Nodaway	1,169	47	37.0	-0.9	67	6	16	1†	34	1.52	-0.35	0.61	2.1	8	6	2	23	nw.	R. B. Montgomery	
Mexico	Audrain	800	48	39.0	-3.0	77	7	12	16	42	1.76	-1.15	0.50	9.5	8	15	1	15	w.	Mrs. Abbie Snoddy	
Moberly	Randolph	875	0	38.0	.....	69	7	14	14	31	1.37	.....	0.35	5.0	8	12	6	13	n.	J. W. Adams	
Monroe City	Monroe	748	16	.....	.....	71	7	14	14	31	1.37	.....	0.32	3.0	4	12	8	11	n.	J. S. Conway	
Oregon	Holt	1,048	81	37.9	-4.7	70	6	18	1†	34	1.86	-0.10	0.56	T.	5	9	11	11	ne.	Miss Mina Wright	
St. Charles	St. Charles	520	49	40.5	-4.0	70	6	12	15	35	2.12	-1.05	1.26	10.0	5	18	7	6	se.	Martin L. Comann	
St. Joseph	Buchanan	957	27	38.7	-1.8	72	6	20	27	31	1.23	-1.25	0.75	1.3	10	6	12	13	nw.	U. S. Weather Bureau	
Shelbina	Shelby	779	44	.....	.....	71	7	16	1	34	1.32	-1.33	0.52	1.4	7	.....	.....	.....	.....	J. C. Jewett	
Steffenville	Lewis	950	39	38.2	-4.0	69	7	16	1	34	1.32	-1.69	0.52	1.0	6	10	11	10	n	Frank Hall	
Tarkio	Atchison	616	34	36.2	-3.9	68	6	16	1†	36	1.59	-0.08	0.66	2.0	7	5	10	16	nw	Albert Volker	
Trenton	Grundy	822	41	37.9	-3.2	71	7	18	1†	35	1.04	-1.41	0.83	T.	4	7	13	11	n.	W. H. Estes	
Unionville	Putnam	1,062	44	35.2	-3.7	69	6†	11	28	38	0.90	-1.60	0.55	0.5	5	10	4	17	s.	John H. Schick	
Warrenton	Warren	816	55	40.2	-2.3	68	6†	13	15	36	1.96	-1.22	1.10	12.0	5	9	6	16	nw.	Prof. A. W. Ebeling	
Keokuk, Iowa	Lee, Ia.	574	66	37.3	-1.6	69	6	18	26	35	0.81	-1.57	0.41	0.8	9	7	8	16	sw	U. S. Weather Bureau	
<b>Division means and extremes</b>				<b>38.1</b>	<b>-3.3</b>	<b>77</b>	<b>7</b>	<b>9</b>	<b>16</b>	<b>42</b>	<b>1.27</b>	<b>-1.22</b>	<b>1.26</b>	<b>3.4</b>	<b>6</b>	<b>10</b>	<b>9</b>	<b>12</b>	<b>nw.</b>		
Southwestern Division																					
Appleton City	St. Clair	853	42	39.8	-5.3	69	7†	11	1	39	2.12	-1.03	1.17	5.5	5	16	0	15	ne.	Rolla Brown	
Buffalo	Dallas	1,200	7	.....	.....	71	7	15	1	38	1.88	.....	0.73	0	6	16	4	11	.....	C. M. McCallister	
Caplinger Mills	Cedar	750	11	.....	.....	71	7	15	1	38	2.12	-0.61	0.96	0.5	9	15	3	13	n.	Ozark Utilities Co.	
Clinton	Henry	765	44	38.8	-6.2	68	7†	15	16	46	2.41	-0.95	0.56	5.0	8	.....	.....	.....	.....	U. S. Weather Bureau	
Concordia	Lafayette	784	22	.....	.....	71	7	15	1	38	0.98	-1.57	0.47	T.	4	14	2	15	e	Miss Ora Stratman	
Dean	McDonald	1,000	33	44.1 <sup>a</sup>	-4.7	70	11†	18	15	43	3.62	-0.08	1.47	2.0	8	14 <sup>b</sup>	6 <sup>a</sup>	10 <sup>a</sup>	ne.	E. S. Taylor	
Eldon	Miller	934	42	38.4	-5.2	69	6	10	15	44	1.67	-1.37	0.54	4.2	7	8	12	11	ne.	E. H. Shepherd	
Garber	Taney	950	2	43.0	.....	75	19	15	1	46	1.88	.....	1.00	T.	8	4	7	20	e.	William H. Durham	
Hailey†	Barry	1,350	12	.....	.....	71	7	15	1	38	3.59	+0.11	1.50	1.0	6	8	20	3	se.	A. W. Madison	
Harrisonville	Cass	904	59	37.0	-4.3	69	6†	14	1†	40	3.92	+1.12	1.40	12.0	7	10	4	17	sw.	John H. Patterson	
Jefferson City	Cole	557	47	37.7	-5.9	69	6	12	1	40	3.37	-1.69	0.45	3.5	7	13	14	4	nw.	Mrs. Frank Kliegel	
Lamar	Barton	980	49	40.6	-5.4	72	19	17	1	41	2.35	-0.84	0.95	T.	5	13	4	14	sw.	Jesse A. Mann	
LaMonte	Pettis	867	36	.....	.....	71	7	15	1	38	1.88	.....	.....	T.	.....	.....	.....	.....	.....	J. E. Wheeler	
Lebanon	Laclede	1,265	49	38.8 <sup>a</sup>	-6.2	68	23	18	15	1	2.25	-1.23	1.15	T.	8	.....	.....	.....	.....	ne.	Mrs. Rosa E. Montelins
Lexington	Lafayette	688	52	39.0	-4.4	73	7	17	15	39	1.91	-0.87	0.63	6.5	6	11	11	9	n.	Miss Carrie Loomis	
Lockwood	Dade	1,078	31	42.4	-4.9	66	19†	22	15	33	1.78	-1.78	0.93	1.0	5	15	8	8	se.	Hubert A. Nieman	
Marshall	Saline	779	50	39.4	-3.6	69	7	16	15	35	1.56	-1.36	0.84	5.5	4	15	8	8	sw.	Sec. Chamber of Commerce	
Mountain Grove	Wright	1,463	36	41.4	-4.0	66	23	17	15	35	1.81	-2.06	1.08	0.5	7	14	8	9	nw.	Mo. Fruit Exp. Sta.	
Neosho	Newton	1,011	50	43.8	-4.3	71	19	21	15	40	2.36	-1.19	0.96	2.1	9	16	5	10	n.	U. S. Fisheries Sta.	
Nevada	Vernon	862	44	42.2	-2.7	71	7	17	15	38	2.90	+0.03	1.30	2.0	5	10	6	15	ne.	T. J. Kaupp	
Seligman	Barry	1,542	36	43.6 <sup>a</sup>	-3.0	70	19	17	15	38	3.46	-0.14	1.45	1.0	7	13 <sup>b</sup>	6 <sup>a</sup>	9 <sup>a</sup>	sw.	Floyd E. Fawver	
Seymour (near)	Webster	1,642	31	40.4	-5.0	67	19	15	1	34	1.94	-1.72	0.97	1.0	5	13	5	13	ne.	A. L. Hailey	
Springfield	Greene	1,301	49	41.2	-4.0	70	19	20	15	27	1.80	-1.59	0.62	1.4	10	8	12	11	n.	U. S. Weather Bureau	
Versailles	Morgan	1,037	5	40.2	.....	74	6	9	15	40	2.16	-0.20	0.94	8.2	8	10	5	16	nw.	I. M. Wilson	
Warrensburg	Johnson	878	50	39.8	-4.2	71	7	14	16	37	1.47	-1.62	0.60	14.0	6	5	10	16	ne.	E. A. Markey	
Warsaw	Benton	687	36	41.1	-5.9	71	19	13	16	37	1.85	-1.70	0.70	7.0	7	11	10	10	n.	Everett Martin	
<b>Division means and extremes</b>				<b>40.6</b>	<b>-4.7</b>	<b>75</b>	<b>19</b>	<b>9</b>	<b>15</b>	<b>46</b>	<b>2.15</b>	<b>-1.01</b>	<b>1.50</b>	<b>3.4</b>	<b>7</b>	<b>12</b>	<b>7</b>	<b>12</b>	<b>ne.</b>		
Southeastern Division																					
Arcadia	Iron	926	56	40.2	-4.4	70															



## Daily Precipitation for March 1937

Stations	Drainage-basins	Day of month																															Total		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
Northern Division																																			
Amity	Grand				.10					T.		T.		T.	.05	T.	T.			.03	.10				.64	.05	T.	T.	T.		T.		.02	0.99	
Bethany	do			.17										T.	.13					.40	.10			.24	.64	.05	T.	T.	T.		T.			1.36	
Bowling Green	Mississippi			.15							.01			.15	.20					.17	.02			.13	.13									0.89	
Brunswick	Grand			.22										.28	.20					.23				.76	.02									1.71	
Canton	Mississippi			.27										.08						.07				.34	.30									1.06	
Chillicothe	Grand			.16	.06										.02	.05				.07	.20			.54	.22									1.32	
Clifton Hill	Chariton			.05	.38				T.		T.	T.	.20	T.						.24			.09	.35	.04	T.	T.	T.		T.				1.31	
Columbia	Missouri			.01	.12				T.		T.	T.	.63	.53						.58	.01		.13	.04	T.	T.	T.		T.					2.07	
Conception	do			.04	.54				T.		T.	T.	T.							.07	.16		.68	.30	T.	T.	T.		T.				1.79		
Downing	Mississippi			T.							T.									.08			.66	.32	T.	T.	T.		T.					1.05	
Edgerton	Missouri			.09									.16	.18	.03					.33	.03			.49	.09									1.57	
Edina	Mississippi			.05							.02									.07				.14	T.	T.						.05		1.05	
Elsberry	do			.16							T.				.49	.20				.08	.07			.33	.10									1.01	
Farber	do			.09	.03						.02				.30	.20				.07				.14	T.	T.								0.94	
Fayette	Missouri			.25					T.					.62	.70	.26				.04	.16	.04		.13	T.	T.								1.01	
Fulton	do			.10										.05	.62	.26				.40	T.			.35	T.	T.								1.67	
Gallatin	Grand			T.									.02	T.						.53				.27	.03									1.90	
Gorlin	Mississippi			T.	.13				.05			.10								.20				.50	.45									1.19	
Grant City	Grand			.04	.15										T.	T.				.10				.57	.12									1.18	
Hannibal	Mississippi			.17							.07				.12	T.				.05	T.	.28		.25	.13	.42	T.	T.	T.		T.			1.32	
Hermann	Missouri			.18										1.04	.28					.06	.06			.20	.15									0.83	
Kahoka	Mississippi			.10	T.				.05	T.										.30				.19				T.	T.					1.99	
Kansas City	Missouri			.04	.02								.17	.16	T.	T.				.06	T.		1.20	.30	.20	T.	T.	T.		T.		.03	.04	0.90	
Kidder	Grand			.06																.06	T.			.30	.20	T.	T.	T.		T.				1.73	
King City	Missouri			.01	.22								.03	.01	.02	.03				.12				.83	.18	T.	T.	T.		T.			.02	1.32	
Kirksville	Mississippi																		.01	.18			.30	.20	.07							.03		1.06	
LaBelle	do			.14	.08							.06								.15				.59	T.									0.74	
Linneus	Grand			.28											T.					.31				.38	.14									1.11	
Louisiana	Mississippi			.17						T.				.10	.27					.24				.55	.41									T.	1.48
Lucerne	Grand			.20																.17				.15	T.									0.86	
Macon	Chariton			.11										.01	T.					.26				.33	.10									0.89	
Madison	Mississippi			.16										.20	.30					.28				.38	.10									0.88	
Maryville	Missouri			.03	.25					T.				T.	T.	T.				.41				.16	.03									1.26	
Memphis	Mississippi			.14						T.			.02	T.						.16	.25			.30	.46	.06	T.	T.	T.		T.			1.52	
Mexico	do			.03	.11	.03									.50	.45				.23	.03			.64	.16	T.	T.	T.		T.				1.22	
Mifflin	Grand			.22										.04						.40				.15	.09	T.	T.							1.76	
Moberly	Mississippi			.12	.13								.02	.32						.38				.29	.43									1.36	
Monroe City	do			.23										.30						.30	.08			.35	.05									1.37	
New London	do			T.										.30						.14				.32										0.99	
Oregon	Missouri			.48							.03			T.	T.	T.				.10	.04			.24	.04	T.	T.	T.		T.				0.94	
Palmyra	Mississippi			.12											T.	T.	T.			.20	.30			.32	T.	T.	T.		T.					1.86	
Paris	do			.10										.19	.20					.12	.04			.26	T.	T.	T.		T.					0.54	
Perry	do			.22										.19	.20					.32				.26	.13									1.04	
Philadelphia	do			.18										.15	.20					.22				.16	T.									.02	0.95
St. Charles	Missouri			T.	.21															.14				.33	.12									0.77	
St. Joseph	do			.09	.03									1.26	.30					.20	T.			.15											2.12
Shelbina	Mississippi			.27								.02		.06	.08	.01	T.			.09	.02			.74	.09	T.	T.	T.		T.			.02	1.23	
Shelbyville	do			.20										.05						.52				.45	.08									1.46	
Steffenville	do			.15										.0						.22				.34	.12									0.96	
Tarkio	Missouri			.05	.22									T.	T.	T.				.23	.15			.52	.22	T.								1.32	
Trenton	Grand			.17										T.	T.	T.				.15	.51			.47	.07	.12								1.59	
Troy	Mississippi			.37	.01									T.	T.	T.				.04				.41										1.04	
Unionville	Chariton			.04											.90	.25				.12	.01			.16		.04								1.86	
Warrenton	Mississippi			.24																.30	.05	.21		.55	.10									0.90	
Keokuk, Ia.	do			.03	.17					.01	.02	.03	T.	T.						.05	.02			.31	.17	T.	T.							1.96	
																																		0.81	
Southwestern Division																																			
Appleton City	Osage			.03										T.	.60					.26			1.17		.29		T.	T.						2.12	
Boonville	Missouri			T.											.80	.45					.37			.54								.06		2.19	
Buffalo																																			



## Daily Precipitation for March 1937—Continued from preceding page

Stations	Drainage-basins	Day of month																															Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Southeastern Div.—Concluded																																		
Caruthersville	Mississippi				.22			.25				.10		.45							.45				.40								1.87	
Centerville	Black	T.		.15	T.							T.	.25	.41							.33	T.			.29								1.43	
Crystal City	Mississippi			.20	T.								.71	.38	T.						.24				.22								1.75	
Cuba	Meramec			.37									.35	.25							.35				.48								1.89	
Dexter	St. Francis			.03	.10		T.					T.	.50							.03	.69			.60									1.95	
Douiphan	Black			.08								.08	.16	T.						.30				.82									1.44	
Farmington	St. Francis			.14									.74	T.							.08			.35									1.31	
Fisk	do	T.			T.	.21						.02	T.	.03							.54			.51									1.31	
Fredericktown	do			T.									T.	.62							.08			.56									1.26	
Goodland	Black												1.06							.15	.20			.19									1.60	
Greenville	St. Francis			.05									.30							.11	.22			.65									1.33	
Jackson	Mississippi			.31									.20	.20							.27			.63									1.61	
Koshkonong	Black												.45								.31			.32									1.08	
Leeper	do			.07									T.	.36						T.	.45			.67									1.55	
Licking (near)	Gasconade			.28									1.10	T.						.11			.14										1.63	
Marble Hill	Mississippi			.15									.12	.10						.18				.57									1.12	
Meramec Park	Meramec			.26									.57	.34							.25			.18									1.60	
Morehouse	Mississippi			.16			T.						.25	T.						.83				.46									1.70	
New Madrid	do			.18				.22				.05	.05	.70	T.						.40			.40									2.00	
Owensville	Gasconade			.30									.08	.44							.35			.20									1.37	
Parma	St. Francis			.12				.16					.69								.44			.55									1.96	
Poplar Bluff	Black			.10	.06							T.	.18								.45			.63									1.42	
Richwoods	Meramec			.11	.06								.26	.72							.19			.14									1.48	
Rolla	do	T.		.23									.01	1.57	T.	T.			T.	T.	.28	T.		.17	T.	T.							2.26	
St. Louis***	Mississippi			.25				T.				T.	.42	.80	T.	T.				.05	T.		.14	.07	.02	T.	T.						1.75	
St. Louis University*	do			.25									.38	.33	T.					.05			.01	T.	.01	T.							1.03	
Salem	Meramec			.15									1.27							.23				.16									1.81	
Slkeston	Mississippi				.33			.10						.35							.75			.47									2.00	
Union	Meramec			.26	.06								.30	.26							.32			.18									1.38	
Valley Park	do			.10	T.								.62	.25							.08			.16									1.21	
Van Buren	Black			.20									.20								.10			.70									1.20	
West Plains	do			.41				.08					.04	.33	T.						.08			.52									1.46	
Williamsville	do			.10	.08								.04	.08	.32						.27			.76									1.61	
Willow Sprgs. (near)	White			.17									.04		.42						.07			.39									1.10	
Zalma	Mississippi			.20										.22							.29			.61									1.32	
Cairo, Ill.***	do			.24			T.					T.	T.	.23						T.			.50			.04	.35	T.						1.36

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. ||||| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. T. Trace, or less than 0.01 inch.  
 \*\*\* Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. \*\* Precipitation in the next following measurement; separate dates of fall not recorded. \* Precipitation is for 24-hour period, midnight to midnight † Estimated. ‡ Partially estimated. ||||| Incomplete.

Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for March 1937  
 (See precipitation data in table on preceding page)

Station	Data	Day of month																															Monthly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Lakeside .....	{ Evaporation .....	.055	.010	.035	.075	.054	.087	.128	.094	.143	.095	.091	.094	.044	...	.093	....	.101	.081	.127	.126	.037	.122	.152	.150	.273	.066	.060	.062	.032	.007	.013	2.591
(Osage Dam)	{ Mean temperature ..	34	41	44	43	48	48	50	40	34	38	44	38	29	26	24	30	40	48	50	42	43	48	51	52	32	28	27	30	36	38	42	39.4
	{ Wind movement ..	54	39	58	63	93	63	56	83	141	73	62	70	103	85	92	61	70	98	76	153	79	60	50	125	232	109	92	117	56	72	66	2,656

Observations taken at 7.30 a. m. Wind movement corrected to true velocities. For description see April 1932 report.  
 \*\*\*\* Evaporation included in next measurement.

Continued from page 11

Thunderstorms.—Local, 4th, 11th, 13th, 14th, 18th, 20th, 23d, 24th; more or less general, 19th.  
 Windstorms.—No damaging windstorms reported.

ERRATA

Annual 1936, page 62: Number of days with 0.01 inch or more precipitation at Columbia should be 87.  
 Feb. 1937, page 7: Greatest precipitation in 24 hours at St. Louis University should be 0.67. Mean temperature at Springfield should be 34.8; departure should be -0.4; page 10: maximum temperature on 1st at Springfield should be 28; mean maximum at Springfield should be 44.1.



Daily Temperatures for March 1937

Stations		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Northern Division																																		
Brunswick §§.....	Maximum	45	55	58	45	61	70	70	43	36	41	42	42	34	35	49	50	56	60	47	56	61	68	65	34	28	32	39	41	42	54	48.2		
	Minimum	20	19	31	39	31	32	37	35	24	23	27	25	27	21	20	18	18	32	32	36	28	30	38	40	24	23	22	22	30	32	28	27.9	
Chillicothe §§.....	Maximum	48	56	58	40	65	71	70	42	33	41	44	41	32	34	33	41	52	59	49	48	55	62	62	56	41	31	32	39	40	47	54	47.6	
	Minimum	20	26	31	37	30	33	38	34	22	24	27	25	24	20	20	20	27	30	36	34	28	34	40	46	22	21	20	20	30	31	29	28.4	
Columbia .....	Maximum	46	60	64	50	61	68	68	42	37	41	48	44	31	31	33	37	52	52	55	52	54	62	65	61	45	28	30	39	43	43	54	48.2	
	Minimum	18	31	45	34	34	43	40	29	24	27	29	27	25	18	14	15	30	34	42	36	30	38	43	45	24	24	23	30	33	32	29	30.5	
Fayette.....	Maximum	48	60	62	52	62	69	70	59	40	40	44	41	33	32	35	38	50	57	57	54	62	64	60	49	30	32	48	42	41	55	49.7		
	Minimum	15	26	35	36	31	37	32	34	28	27	26	25	16	11	27	31	38	35	27	38	41	48	44	24	23	22	29	32	32	25	28.6		
Grant City .....	Maximum	42	50	53	45	63	67	72	57	39	38	39	36	35	29	29	38	51	56	53	47	45	58	56	50	52	25	32	35	38	45	54	46.1	
	Minimum	15	28	37	30	30	38	34	24	19	26	29	25	23	25	20	29	29	38	32	30	36	39	42	15	18	15	27	30	27	31	28.0		
Hannibal .....	Maximum	43	56	63	57	58	68	68	62	32	34	38	40	35	31	32	38	53	54	51	50	53	57	62	63	54	26	32	43	47	48	53	48.4	
	Minimum	20	31	42	36	31	43	41	31	19	23	25	25	26	23	21	23	28	33	37	33	31	36	38	49	20	19	21	26	27	33	30	29.7	
Kansas City .....	Maximum	49	61	53	48	64	70	70	46	41	42	45	38	31	30	34	39	56	58	64	49	56	65	61	55	35	28	29	35	40	40	55	48.0	
	Minimum	26	32	44	34	34	44	39	31	27	28	30	28	27	24	21	26	36	33	39	36	30	37	41	35	24	25	22	28	32	31	32	31.5	
Kidder §§.....	Maximum	45	54	56	42	63	67	66	41	30	38	40	40	30	27	32	36	49	54	48	46	53	60	58	52	30	26	30	35	40	42	52	44.6	
	Minimum	17	17	29	38	31	33	33	23	23	26	27	21	24	24	20	21	30	31	33	29	31	37	42	22	22	20	20	30	30	42	52	41.6	
Kirksville .....	Maximum	42	53	58	50	60	69	71	44	32	35	41	40	33	31	35	40	52	56	45	44	52	58	61	56	46	24	32	42	45	44	53	46.6	
	Minimum	14	30	34	33	30	40	44	34	27	19	22	24	22	22	19	15	27	29	33	31	25	32	33	44	18	19	19	29	23	32	30	27.0	
Louisiana .....	Maximum	40	55	62	50	60	66	68	62	35	38	40	42	33	30	34	38	50	50	50	50	50	55	62	60	28	32	35	45	48	55	48.0		
	Minimum	18	28	35	44	32	42	40	35	22	24	21	22	26	20	20	15	27	36	36	42	26	36	38	42	22	21	23	27	22	33	29.4		
Macon§§.....	Maximum	44	54	52	44	60	69	72	42	34	37	40	42	30	32	37	40	51	56	49	45	54	60	62	60	34	27	34	42	47	47	55	46.8	
	Minimum	18	23	33	42	29	31	41	31	19	21	24	23	26	20	18	20	28	29	34	32	29	31	36	44	20	20	26	21	27	32	28	27.1	
Maryville .....	Maximum	42	53	54	41	64	67	64	54	32	39	40	40	36	33	29	30	38	52	56	50	45	52	59	55	59	41	25	29	35	37	46	54	45.6
	Minimum	16	27	37	32	30	36	37	30	20	26	30	26	26	23	24	21	29	27	39	32	27	36	40	41	19	19	16	26	29	28	30	28.4	
Mexico §§.....	Maximum	47	59	67	62	65	71	77	49	35	40	45	46	35	40	40	40	55	55	52	48	54	64	67	68	55	37	35	45	47	54	57	51.6	
	Minimum	18	21	30	40	30	31	37	33	21	22	25	23	24	14	13	12	32	33	38	28	31	37	40	23	21	21	21	26	32	30	29	26.3	
Moberly .....	Maximum	44	56	61	48	59	68	69	47	34	37	42	40	32	34	36	48	54	56	51	56	60	62	60	46	45	39	40	46	46	52	47.6		
	Minimum	19	32	40	34	30	42	38	30	21	25	24	23	24	14	17	15	26	31	37	34	27	36	39	45	23	21	21	28	32	29	28.5		
Oregon .....	Maximum	45	54	51	48	64	70	65	49	35	44	41	37	32	30	31	38	50	58	52	47	54	65	58	50	43	27	31	34	37	46	54	46.5	
	Minimum	18	30	40	32	30	39	40	32	23	25	30	27	27	23	21	22	30	28	38	32	28	36	42	42	20	21	18	25	29	28	31	29.3	
St. Joseph .....	Maximum	47	61	52	46	63	72	68	44	37	41	43	40	38	31	32	37	52	58	51	48	55	61	59	52	30	27	31	35	38	44	53	46.5	
	Minimum	24	33	46	33	32	43	39	28	25	32	29	28	25	24	23	21	33	31	39	34	29	39	44	20	23	23	20	27	31	30	32	30.9	
Trenton .....	Maximum	46	57	54	46	64	67	71	52	33	39	42	40	36	30	31	41	52	58	50	45	58	59	61	54	40	27	30	39	41	44	54	47.1	
	Minimum	18	30	39	37	30	39	36	32	20	25	27	24	30	25	20	18	18	30	38	32	27	35	41	40	20	20	19	28	31	30	31	28.7	
Unionville §§.....	Maximum	43	52	56	38	61	69	69	43	30	37	40	39	33	30	33	41	53	56	44	45	52	58	61	55	38	28	30	41	45	45	54	45.8	
	Minimum	17	17	30	37	30	31	37	31	17	17	12	21	26	22	19	18	19	28	28	31	30	35	37	17	17	16	11	22	29	29	24.5		
Warrenton .....	Maximum	44	59	66	63	68	68	64	39	41	48	47	41	30	33	40	47	50	50	52	55	61	64	66	63	31	32	42	46	49	54	50.8		
	Minimum	18	30	39	44	33	43	39	34	21	25	25	25	16	13	18	24	35	37	36	30	35	37	46	49	27	21	20	28	27	33	28	29.5	
Southwestern Division																																		
Appleton City .....	Maximum	50	62	52	48	64	62	69	63	45	44	54	46	36	33	33	46	61	54	69	59	59	66	64	57	47	31	32	35	39	40	56	50.8	
	Minimum	11	26	38	37	34	36	35	35	24	29	29	25	19	15	15	29	38	36	28	34	40	46	26	25	21	26	24	30	25	28	28.8		
Clinton .....	Maximum	49	62	57	50	59	63	68	63	44	49	55	45	34	31	31	41	61	55	61	58	66	61	58	48	32	29	36	40	39	56	50.5		
	Minimum	16	16	39	35	24	22	23	18	16	30	30	25	20	18	15	30	31	38	35	31	35	41	42	26	25								







MS

# CLIMATOLOGICAL DATA

19  
**MISSOURI SECTION**  
ROSCOE NUNN  
ST. LOUIS, MO.  
Vol. XLI APRIL 1937 No. 4  
PRICE: 5 CENTS A COPY; 25 CENTS A YEAR

## GENERAL SUMMARY

Temperature and rainfall in general were not far from normal this month. The temperature was somewhat deficient, especially in the northern and western sections, and rather severe cool spells occurred about the 4-11th and the 24-28th. However, there was very little frost damage. Unusually warm days came about the 13-14th, 17th, and 22-23d.

Rainfall was greater than normal almost generally, with unusually heavy amounts over small areas in the lower southeast, the middle southwest, the extreme east-central, and the extreme northwestern counties. But the State average was only slightly more than normal, and a considerable west-central area received less than normal. All rainfall received was welcome, as it helped further to restore ground moisture to almost normal conditions.

Vegetation did not make quite normal progress, owing to low temperatures, especially around the 24-28th, and field work was somewhat backward. Preparations for corn planting were delayed, but not seriously. The moisture situation being good, these retarding influences could be quickly overcome by a few days of warm, fair weather. Wheat, oats, rye, and barley were generally in good to excellent condition at the end of April. Pastures and grasses generally were a little short, but otherwise promising. Fruit prospects were excellent.

River stages averaged considerably below normal and no floods of much consequence occurred in smaller streams.

## TEMPERATURE

The monthly mean temperature for the State, 72 stations reporting, was 54.5°, or 0.7° below normal. The highest monthly mean was 60.0° at Campbell, and the lowest monthly mean was 48.6° at Unionville. The highest temperature recorded was 93° at Crystal City, St. Charles, and St. Louis University on the 17th, and the lowest was 21° at Licking (near) on the 6th and 11th. The greatest daily range was 51° at Garber on the 2d.

## PRECIPITATION

The average precipitation for the State, 132 stations reporting, was 4.04 inches, or 0.13 inch more than normal. The greatest local monthly amount was 7.95 inches at Lockwood, and the least local monthly amount was 1.22 inches at Macon. The greatest amount in any twenty-four hours was 3.25 inches at Caruthersville on the 30th. The average number of days with 0.01 inch or more of precipitation was 10. The snowfall averaged only a trace, or 0.6 inch less than normal. The greatest monthly snowfall was 1.5 inches at Ozark Beach.

## MISCELLANEOUS PHENOMENA

Dust.—10th, 11th, 12th, 13th, 14th, 15th, 16th.

Fog.—Dense, 2d, 4th, 13th, 20th, 27th, 28th, 29th, 30th.

Frost.—Light, 2d, 7th, 9th, 10th, 11th, 27th; heavy, 2d, 6th, 9th, 10th, 11th; killing, 1st, 2d, 5th, 6th, 10th, 11th.

Glaze.—5th.

Hail.—Light, 4th, 12th, 14th, 23d, 24th, 25th, 26th, 28th, 29th; moderate, 13th, 14th, 23d, 24th, 29th; heavy, 23d, 29th, 30th. (See special hailstorm notes.)

Hailstorms.—On the 29th hail did much damage to greenhouses, skylights, automobiles, fruit trees, and crops, and

killed some young livestock. It was most destructive in the vicinity of Carthage, Jasper County, with damage estimated at \$30,000, affecting an area about 3 by 8 miles in extent.

Halos.—Solar, 3d, 6th, 7th, 8th, 9th, 12th, 13th, 16th, 17th, 23d, 25th; lunar, 16th, 17th, 19th, 20th, 22d, 25th.

Sleet.—4th, 5th, 24th, 25th, 26th.

Smoke.—Dense, 2d, 19th.

(Continued on page 19)

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind				Relative humidity			Percentage of sunshine
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12 noon	6:30 p. m.	
Columbia.....	29.87	30.39	11	29.37	23	9.9	32	se.	29	80	58	60	49
Kansas City.....	29.87	30.37	11	29.30	23	12.4	41	w.	24	78	55	55	62
St. Joseph.....	29.87	30.35	11	29.28	23	11.7	43	n.w.	24	80	56	54	55
St. Louis.....	29.81	30.43	11	29.39	21	11.5	32	sw.	24	77	61	54	51
Springfield.....	29.88	30.34	11	29.37	23	12.3	31	s.	29	78	59	58	57
Cairo, Ill.....	29.91	30.43	11	29.45	21	10.7	30	sw	14	76	58	59	60
Keokuk, Iowa..	29.88	30.43	11	29.36	24	9.6	35	sw.	24	78	59	62	47

## COMPARATIVE DATA FOR APRIL

Year	Temperature			Precipitation					Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy
1888.....	57.9	94	20	1.92	1.54	2.37	1.83	....	5	..	..	..
1889.....	55.7	90	27	2.66	2.84	3.31	1.83	....	8	..	..	..
1890.....	56.2	93	25	3.58	2.26	3.43	5.05	T.	8	..	..	..
1891.....	56.8	93	15	3.46	3.88	4.08	2.41	T.	9	..	..	..
1892.....	53.1	90	24	5.83	5.14	5.35	7.01	0.0	11	9	8	13
1893.....	53.9	95	19	8.27	6.37	9.14	9.29	0.0	12	9	8	8
1894.....	56.1	95	20	3.11	2.24	3.52	3.58	T.	8	14	8	13
1895.....	57.9	100	24	2.04	1.87	2.08	2.17	0.0	12	10	9	8
1896.....	61.9	92	17	3.57	3.10	4.35	3.25	0.0	9	11	12	7
1897.....	54.4	88	21	4.65	4.07	3.78	6.10	T.	10	10	11	9
1898.....	52.5	90	14	3.64	3.77	3.75	3.40	T.	10	10	11	9
1899.....	54.0	96	6	3.80	3.46	4.02	3.93	3.8	8	12	9	9
1900.....	56.7	89	21	3.50	3.05	3.66	3.78	0.7	9	11	10	9
1901.....	53.3	94	24	2.96	2.63	2.83	3.41	1.8	11	13	11	6
1902.....	53.9	95	19	2.82	1.98	3.30	3.18	T.	11	13	11	10
1903.....	55.9	91	26	3.37	3.97	3.34	2.79	1.2	10	13	11	6
1904.....	49.0	84	19	5.63	6.14	6.07	4.67	2.7	9	15	8	9
1905.....	54.9	92	20	3.09	3.66	2.28	3.34	0.3	6	14	8	8
1906.....	59.5	93	22	2.42	2.67	2.40	2.18	0.0	6	17	7	6
1907.....	48.7	89	16	3.33	2.62	3.83	3.55	T.	8	11	8	11
1908.....	56.6	90	18	5.89	2.55	6.58	8.53	T.	11	11	8	11
1909.....	54.8	93	19	4.72	4.36	3.60	6.21	T.	8	13	9	8
1910.....	54.8	97	21	3.58	2.74	3.55	4.45	0.9	11	12	7	11
1911.....	53.5	91	20	4.93	4.28	4.70	5.81	T.	10	12	8	10
1912.....	56.0	89	24	6.08	3.78	6.47	8.00	0.7	10	13	7	10
1913.....	56.2	94	25	3.32	3.36	3.10	3.50	T.	7	16	6	9
1914.....	55.2	91	18	3.14	2.57	3.11	3.75	T.	8	12	7	11
1915.....	61.9	96	18	2.12	1.93	2.64	1.79	T.	7	16	8	6
1916.....	53.5	93	21	3.32	2.77	3.93	3.27	1.9	10	11	8	11
1917.....	53.2	89	19	5.95	5.66	5.08	7.11	1.2	12	12	6	12
1918.....	50.8	93	19	5.33	3.61	5.26	7.11	0.9	12	12	6	12
1919.....	55.3	94	20	3.03	3.15	3.46	2.47	T.	9	12	7	11
1920.....	50.2	89	4	3.82	4.86	3.30	3.31	4.8	11	11	7	12
1921.....	56.0	91	19	5.36	4.70	5.22	6.16	T.	10	13	7	10
1922.....	57.3	91	24	6.41	4.96	8.47	5.81	T.	11	13	6	11
1923.....	54.2	92	14	3.26	2.52	3.38	3.89	0.4	8	14	8	8
1924.....	56.6	95	11	2.15	1.26	2.78	2.40	T.	6	14	8	8
1925.....	61.0	92	24	4.12	4.12	4.73	3.52	0.0	10	12	9	9
1926.....	49.9	91	11	2.42	2.39	2.17	2.69	2.4	8	14	6	10
1927.....	57.7	94	18	8.68	6.73	8.61	10.70	T.	14	10	7	13
1928.....	51.6	88	16	4.86	2.76	5.46	6.37	0.2	8	13	7	10
1929.....	57.4	96	27	6.15	6.32	6.58	5.56	0.0	12	11	8	11
1930.....	59.1	96	23	2.02	1.89	2.77	1.39	0.0	8	14	8	8
1931.....	54.8	90	22	2.96	2.92	2.77	3.18	T.	9	14	6	10
1932.....	57.6	95	22	2.58	2.43	2.52	2.78	0.0	8	14	8	8
1933.....	54.9	88	22	3.84	2.08	3.82	5.62	0.7	10	11	9	10
1934.....	56.5	90	24	2.50	2.06	2.61	2.84	T.	7	16	8	6
1935.....	52.3	90	23	2.90	3.10	3.02	2.59	0.7	9	9	7	14
1936.....	53.0	95	9	2.45	2.00	1.93	3.41	0.5	8	16	7	7
1937.....	54.5	93	21	4.04	3.25	3.67	5.21	T.	10	10	8	12
Period.....	55.2	100	4	3.91	3.37	4.04	4.32	0.6	9	12	8	10



## Climatological Data for April 1937

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches				Number of days				Prevailing direction of wind	Observers	
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from the normal	Greatest in 24 hours	Total snow fall, unmelting	With precip., .01 inch or more	Clear	Partly cloudy			Cloudy
Northern Division																				
Bethany	Harrison	916	42	51.0	- 0.5	80	22†	25	6	36	2.73	-0.56	1.41	T.	6	13	7	10	se.	A. S. Cumming
Brunswick	Chariton	652	56	51.6	- 2.6	84	23	27	6	37	3.17	-0.66	1.48	0	11	12	3	15	nw.	O. K. Benecke
Chillicothe	Livingston	779	28	52.0	- 0.0	83	22	27	6	37	2.78	-0.44	1.09	0	13	13	9	8	se.	Win. J. Olenhouse
Clifton Hill	Randolph	731	38	52.6	- 0.9	83	22	27	6	32	3.11	-0.25	0.85	T.	12	8	10	12	sw.	Dr. A. J. Bradsher
Columbia	Boone	740	47	53.9	- 1.0	86	22	28	6	36	3.75	-0.02	1.13	T.	13	6	9	15	nw	U. S. Weather Bureau
Conception	Nodaway	980	48	51.7	- 0.5	79	14†	27	6	32	3.80	+1.07	2.08	T.	7	6	12	12	nw.	Fr. Adelhelm Hess
Downing	Schuyler	876	16	51.0	- 2.2	80	14†	27	6	42	3.43	-0.45	1.75	T.	12	7	9	14	ne.	Everett Rowe
Edgerton	Platte	856	17	53.2	- 0.6	79	16	27	6†	34	1.84	-1.24	0.73	T.	8	14	5	11	s.	Fred L. Stiff
Elsberry	Lincoln	449	6	53.5	.....	90	17	26	11	40	3.35	.....	0.90	0	13	8	15	7	nw.	Ray E. Mills
Fayette	Howard	680	57	53.7	- 0.5	85	22	25	6	40	2.64	-0.91	0.81	T.	11	7	10	13	s.	Harry P. Mason
Fulton	Callaway	818	49	53.0	- 1.6	88	17	28	6	40	1.47	+0.16	1.03	T.	12	13	6	11	se.	Clyde C. Herring
Gorin	Scotland	700	50	.....	.....	.....	.....	.....	.....	.....	3.44	+0.03	1.92	T.	9	12	7	11	se.	W. L. Harker
Grant City	Worth	1,134	33	51.4	- 0.8	79	22	30	5	38	2.74	-0.22	1.49	T.	8	4	11	15	se.	Howard Kybolt
Hannibal	Marion	759	45	53.0	- 0.4	84	23	30	6	38	3.81	+0.62	1.24	0	11	5	8	17	se.	Hannibal Water Dept.
Kansas City	Jackson	741	48	54.0	- 0.8	82	22	29	6	37	2.51	-0.63	1.12	T.	9	5	9	16	nw.	U. S. Weather Bureau
Kidder	Caldwell	1,020	45	52.0	- 0.2	80	22†	28	6	34	2.35	-0.93	0.71	T.	13	11	6	13	nw.	Roscoe L. Terry
King City	Gentry	1,095	11	.....	.....	.....	.....	.....	.....	.....	2.19	-1.11	1.23	0	7	3	14	13	se.	John M. Martin
Kirksville	Adair	969	48	50.7	- 1.2	81	22	24	6	42	3.00	-1.10	1.04	T.	11	6	11	13	sw.	Charles Noble
Linneus	Linn	816	5	.....	.....	.....	.....	.....	.....	.....	2.72	.....	1.12	T.	8	9	8	13	nw.	H. D. Taggart
Louisiana	Pike	469	43	53.3	- 0.7	85	17	28	6	36	5.18	+1.46	0.90	T.	12	16	2	12	w.	Stark Bro's Nurseries
Macon	Macon	875	38	50.0	- 3.1	84	22	26	6	43	1.22	-2.44	0.31	0	8	15	5	10	w.	W. C. Brown
Maryville	Nodaway	1,169	47	51.1	+ 0.3	79	22	27	6	36	3.37	+0.36	1.40	0.5	9	5	7	18	nw.	R. B. Montgomery
Mexico	Audrain	800	48	52.0	- 1.8	86	17	27	6	42	3.51	-0.24	0.82	0	12	15*	3*	11*	w.	Mrs. Abbie Snoddy
Moberly	Randolph	875	0	49.4†	.....	84	22	27	2†	.....	3.50	.....	1.15	T.	13	5†	3†	12†	.....	McCormick Hospital
Monroe City	Monroe	748	16	.....	.....	.....	.....	.....	.....	.....	2.77	-0.90	0.98	0	9	9	8	13	s.	J. S. Conway
Oregon	Holt	1,048	81	53.0	+ 0.3	84	22	30	5†	36	3.82	+0.53	2.07	T.	10	12	8	10	nw.	Miss Mina Wright
St. Charles	St. Charles	520	49	54.0	- 1.6	93	17	30	2	48	4.72	+0.97	1.62	T.	12	16	6	8	sw.	Martin L. Comann
St. Joseph	Buchanan	957	27	52.9	- 0.6	82	22	31	5	32	2.01	-1.18	0.54	T.	9	10	7	13	nw.	U. S. Weather Bureau
Shelbina	Shelby	779	44	.....	.....	.....	.....	.....	.....	.....	2.39	-1.36	1.01	0	10	.....	.....	.....	.....	J. C. Jewett
Steffenville	Lewis	650	39	51.8	- 1.3	82	22†	27	6	42	2.66	-0.92	0.72	0	10	13	9	8	n.	Frank Hall
Tarkio	Atchison	916	34	51.2	- 1.0	84	22	28	6	37	5.62	+2.38	3.00	0	4	12	6	12	nw.	Albert Volker
Trenton	Grundy	822	41	52.2	- 0.5	81	23	25	6	35	4.07	+0.49	1.27	T.	11	8	12	10	s.	W. H. Estes
Unionville	Putnam	1,062	44	48.6	- 2.4	81	23	26	6	39	3.07	-0.63	1.23	0	10	13	3	14	s.	John H. Schick
Warrenton	Warren	816	55	55.2	+ 0.4	89	17	29	6	37	4.37	+0.33	1.45	T.	13	5	12	13	nw.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.	574	66	51.1	- 1.2	82	23	31	6	32	3.90	+0.91	2.31	T.	14	5	7	18	se.	U. S. Weather Bureau
Division means and extremes				52.1	- 1.0	93	17	24	6	48	3.25	-0.12	3.00	T.	10	10	8	12	nw.	
Southwestern Division																				
Appleton City	St. Clair	853	42	55.0	- 1.1	84	23	25	6	44	2.72	-1.41	0.70	T.	8	13	6	11	sw.	Rolla Brown
Buffalo	Dallas	1,200	7	.....	.....	.....	.....	.....	.....	.....	5.51	.....	2.21	0	9	15	7	8	.....	C. M. McCallister
Caplinger Mills	Cedar	750	11	.....	.....	.....	.....	.....	.....	.....	2.26	-1.33	0.78	0	8	13	8	14	se.	Ozark Utilities Co.
Clinton	Henry	765	44	55.0	- 1.3	83	22	27	6	45	2.75	-1.42	0.90	0	9	.....	.....	.....	.....	U. S. Weather Bureau
Concordia	Lafayette	784	22	.....	.....	.....	.....	.....	.....	.....	3.03	-0.31	.....	0	13	13	0	17	nw.	Miss Ora Stratman
Dean †	McDonald	1,000	33	57.9	+ 1.2	86	17†	25	6	44	5.37	+0.68	3.24	0	7	10	11	9	sw.	E. S. Taylor
Eldon	Miller	934	42	52.4	- 3.0	88	17	28	1	43	3.52	-0.64	1.35	0	10	5	22	3	se.	E. H. Shepherd
Garber	Taney	950	2	57.4	.....	92	17	22	6	51	8.63	.....	1.50	0.3	11	8	6	16	e.	William H. Durham
Hailey†	Barry	1,350	12	.....	.....	.....	.....	.....	.....	.....	4.00	-0.39	1.80	0	8	9	16	5	w.	A. W. Madison
Harrisonville	Cass	904	59	51.2	- 2.7	81	16†	29	1†	43	2.36	-1.02	0.74	0	12	5	6	19	nw	John H. Patterson
Jefferson City	Cole	587	47	52.0	- 4.0	86	17	27	6	44	3.76	-0.22	1.04	0	12	8	12	10	w.	Mrs. Frank Kilgell
Lamar	Barton	980	49	54.6	- 2.0	85	17†	27	1	48	3.35	-1.17	0.85	0	9	13	6	11	sw.	Jesse A. Mann
Lebanon	Laclede	1,265	49	55.2	- 0.3	87	17	27	6	42	5.35	+1.00	1.35	0	12	10	10	10	nw.	Mrs. Rosa E. Montelius
Lexington	Lafayette	688	52	53.0	- 1.6	84	23	29	6	38	2.78	-1.02	1.53	0	14	12	11	7	nw.	Miss Carrie Loomis
Lockwood	Dade	1,078	81	55.6	- 0.9	84	17	30	6†	38	7.95	+3.42	2.55	T.	9	10	15	5	nw.	Hubert A. Nieman
Marshall	Saline	779	50	54.9	+ 0.1	84	22	30	6	40	3.17	-0.72	1.04	T.	11	13	5	12	sw.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	36	54.4	- 0.5	88	17	25	6	39	4.85	+0.33	1.37	1.0	14	9	14	7	se.	Mo. Fruit Exp. Sta.
Neosho	Newton	1,011	50	58.2	+ 0.1	88	17	26	6	43	4.12	-0.44	3.18	0	9	15	9	6	se.	U. S. Fisheries Sta.
Nevada	Vernon	862	44	56.4	+ 0.7	86	17	30	11	45	2.60	-1.69	0.80	0	8	9	7	14	sw.	T. J. Kaupp
Sedalia	Pettis	910	17	55.6	+ 0.3	83	17	31	5†	39	4.59	+0.86	1.10	T.	12	10	6	14	.....	Mrs. Laura S. Trader
Seligman	Barry	1,542	36	57.0*	+ 0.4	84	17	28	6	37	3.95	-0.11	1.68	0	7	15*	9*	5*	w.	Floyd E. Fawver
Seymour (near)	Webster	1,642	31	.....	.....	.....	.....	.....	.....	.....	3.97	-0.35	.....	0	.....	.....	.....	.....	.....	A. L. Hailey
Springfield	Greene	1,301	49	55.0	- 1.0	87	17	30	6	36	5.19	+1.33	1.70	T.	12	7	13	10	se.	U. S. Weather Bureau
Versailles	Morgan	1,037	5	55.8	- 0.1	86	17	27	6	42	3.50	-0.94	0.86	0	11	8	7	15	se.	I. M. Wilson
Warrensburg	Johnson	878	50	55.0	- 1.1	82	23	32	5†	39	2.67	-0.99	0.88	T.	13	8	5	17	sw.	E. A. Markey
Warsaw	Benton	687	36	56.5	- 0.2	86	17	26	6	45	2.91	-1.55	0.54	0	13	6	16	8	w.	Everett Martin
Division means and extremes				55.1	- 0.9	92	17	22	6	51	3.67	-0.37	3.24	T.	10	10	9	11	sw.	
Southeastern Division																				
Arcadia	Iron	926	56	54.2	- 1.1	91	17	28	10	46	5.53	+0.71	1.13	0	14	13	7	10	s.	Arcadia College
Blrth Tree (near)	Shannon	1,000	42	56.0	- 1.1	91	17	26	2	43	5.20	+0.44	1.65	0	9	18	3	9	n.	V. H. Kirkendall
Campbell	Dunklin	314	11	60.0																



## Daily Precipitation for April 1937

Stations	Drainage-basins	Day of month																														Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
Northern Division																																	
Amity	Grand	.09			.02			.31	.20	T.			.40									.50	.67			.11	.06	T.	T.			.34	2.70
Bethany	do				T.			.47					.17													.07	T.					.44	2.73
Bowling Green	Mississippi	.23			.85									.18												.28	.10	.05			.35	.88	4.07
Brunswick	Grand	.10		.15	.21				.04					.31	.03											.07	.09	.17	.08		.09	.19	2.80
Canton	Mississippi	.09	.04		.61					T.				.27	.20											.10	.09				.05	.85	3.11
Chillicothe	Grand	.15		.02	.04			.02	.11				.27													.10	.09				.05	.85	3.11
Clifton Hill	Chariton	.16		.63	.06				.02		T.			.19												1.09	.13	T.		.02	.01	.17	2.78
Columbia	Missouri	.12		T.	.31				T.				.15	.56	T.											.10	.09				.05	.85	3.11
Conception	do	.31						.83					.21													.34	T.	.08	.05	.01	.74	.40	3.75
Downing	Mississippi	.10		.02	.12			.05	T.				.20													.26	T.				.11		3.80
Edgerton	Missouri	T.		.16				.23	.23																	.24	.08	.05	.05		T.	.77	3.43
Edina	Mississippi	.03		.04	.05	.24							.19													.25	T.	.06		.05	.09		1.84
Elsherry	do	.12		.08	.11	T.			T.				.18													.16	.08	.06	T.	.05	T.	.20	3.14
Farber	do	T.	.14		.35					T.			.19	.09												.25	.06			.05	.29	.50	3.35
Fayette	Missouri	.12		.35									.29													.20	.18				.54	.57	3.59
Fulton	do		.05		.45								.12	.44												.44	.06	.04	T.	T.	.07	.04	2.64
Gallatin	Grand	.20		T.	T.			.11	.32				.32													.18	.04	.08			1.03	.55	4.17
Jerin	Mississippi	.12		T.	.44			T.	T.				.18													.14	.08	T.	T.				2.14
Mount City	Grand	.06						.61					.18													.33	.13	.10	T.	T.	T.	.22	3.44
Humboldt	Mississippi	T.	.07		.59								.28													.48	.01	.07			.02		2.74
Hornum	Missouri	.03		.80									.08	.70												.10	.05	.18	.06		.24	.87	3.81
Kahoka	Mississippi	.03		.80									.08	.70												.10	.05	.18	.06		.24	.87	3.81
Kansas City	Missouri	T.	.05	.03	.75				T.	T.			.03	T.												.16	.02	.11	.04		.44	.86	4.89
Kidder	Grand	.16		.05	.02			.06	.03	T.			.08	T.												.12	.71				.05	.10	3.83
King City	Missouri							.37	.23	T.			.09													.20	.05	T.	.04	T.	.02	.36	2.85
Kirksville	Mississippi	.10		.41				.08					.18													.20	.10				.20		2.19
LaBelle	do				.41								.28													.56	1.04				.29	.13	3.00
Linneus	Grand	.05		.14	.05			.06					.18													.21	.05	.11	.06		.02		2.88
Louisiana	Mississippi	.24		.80									.80		.20											.25	T.		T.		.45		7.0
Lucerna	Grand	.02		.07	.30			.02	.38				.24													.23	.07	.45			.02		1.22
Macon	Chariton		T.	.03	.14			T.					.05													.31	.15	.09	T.		T.	.30	3.45
Madison	Mississippi	.08	.11		.05			1.00	.04		T.		.07													.30	.06	.12	.10		.02	.21	2.59
Maryville	Missouri												.15													.41	.09	T.			.20		3.87
Memphis	Mississippi	T.	.15	.11	T.	.30		.05					.23													.41	.09	T.			.20		3.87
Mexico	do		.20		.55								.18	.08												.17	T.	.08	.10	.02	T.	.38	3.08
Milan	Grand	.21	.20		.18			.12	.17				.15	.13												.20	.10	.18	.05		.25	.50	3.51
Moberly	Mississippi	.09		.52									.25		.02											.03	.01	.05	.02	.08	1.15	.30	3.06
Monroe City	do	.11		.48									.27													.19	.18	.12			.44		2.77
New London	do	.29		.60									.37													.07	.14	.24			.19	.52	3.24
Oregon	Missouri	.17		.21				.58	.01				.17													.45	.06			.02			3.82
Palmyra	Mississippi	.06		.59									.20													.10	.11	.07	.11		.45		3.23
Paris	do	.08		.45									.25													.18	.11	.07	.05		.06	.10	2.36
Perry	do		.08		.55								.30													.19	.12	.15			.19	.51	3.34
Philadelphia	do		.15		.46								.21													.19	.12	.15			.10	.21	2.83
St. Charles	Missouri		.15		.55	.60	.13		T.	T.			.24		.12											.57	.10	.18			.39	.30	4.72
St. Joseph	do	.15		T.				.54	T.	T.			.24		.12											.57	.10	.18			.39	.30	4.72
Shelbina	Mississippi		.09	T.	.48								.26													.22	.07	.11	.03	.02	.29		2.01
Shelbyville	do		.08		.12								.20													.27	.10	.30			.03	.09	2.39
Steifensville	do	.02		.60	.03								.27													.27	.10	.30			.18		2.45
Tarkio	Missouri			.60	.03								.27													.27	.10	.30			.18		2.45
Trenton	Grand	.14		.04				.30	T.				.26													.27	.10	.30			.18		2.45
Troy	Mississippi	.08		.72									.05	.16												.73	.06	.02	T.		.21	1.04	4.07
Unionville	Chariton	.05		.06	T.			.12	.24				.17													.18	.03				.16	.40	3.25
Warrenton	Mississippi	.10		.75	T.								.06	.64												.18	.20	.14			.14	1.23	3.07
Keokuk, Ia.	do	.10	.02	.07	.64			T.	T.				.11													.26	.03	.24		.14	.25	.84	4.37
Southwestern Division																																	
Appleton City	Osage			.88				.33					.05													.24	T.		.12	.27			2.72
Boonville	Missouri	T.	.08		.45								.18	.13												.60	.02	.05	.01		.20	.14	3.23
Buffalo	Osage			.15				.22																									



Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation.

\*\*\* Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight.      \*\* Precipitation in the next following measurement; separate dates of fall not recorded.      \* Precipitation is for 24-hour period, midnight to midnight      † Estimated.      ‡ Partially estimated.      |||| Incomplete.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours.      T. Trace, or less than 0.01 inch.

Observations taken at 7.30 a. m. Wind movement corrected to true velocities. For description see April 1932 report.  
 \*\*\*\* Evaporation included in next measurement.

January 1937, page 2:—Total snowfall for Dean should be 11.0.



## Daily Temperatures for April 1937

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	..	Mean		
Northern Division																																		
Brunswick §§	Maximum	45	65	69	42	42	56	55	49	54	57	64	65	77	80	62	76	83	73	75	63	69	83	84	56	50	51	54	61	74	72	..	63.5	
Brunswick §§	Minimum	28	31	32	37	32	27	28	42	36	31	32	33	44	45	46	45	44	45	45	52	47	47	47	44	37	37	38	39	45	50	..	39.8	
Chillicothe §§	Maximum	44	59	69	55	41	48	53	48	54	61	63	71	78	77	63	71	77	74	76	60	68	83	82	68	52	49	54	56	72	72	..	63.3	
Chillicothe §§	Minimum	36	31	37	35	31	27	35	40	31	30	34	44	46	52	44	44	48	51	44	51	50	46	52	42	37	36	37	39	45	47	..	40.8	
Columbia	Maximum	49	68	72	45	42	56	61	50	53	56	61	62	79	75	63	70	84	69	74	61	69	86	84	61	48	47	57	53	77	72	..	63.5	
Columbia	Minimum	36	33	44	35	33	28	46	43	36	31	33	44	47	59	48	44	62	53	47	54	53	50	59	45	36	37	40	47	53	54	..	41.3	
Fayette	Maximum	50	66	68	60	42	58	58	53	54	58	62	64	80	77	67	70	81	71	75	67	67	85	82	78	49	50	56	53	75	72	..	64.9	
Fayette	Minimum	39	28	50	32	32	25	44	42	36	34	33	42	60	47	44	59	53	41	51	53	45	58	44	36	36	40	40	48	51	..	42.5		
Grant City	Maximum	48	58	59	42	42	56	52	45	53	61	61	68	76	75	67	71	74	77	68	68	79	78	74	38	47	47	57	71	69	..	61.6		
Grant City	Minimum	33	33	38	34	30	35	42	36	34	33	32	45	42	60	43	44	57	46	43	50	48	44	58	36	33	34	37	41	48	47	..	41.2	
Hannibal	Maximum	50	55	68	63	42	52	56	51	52	56	58	59	75	77	69	64	82	71	74	70	67	75	84	78	46	46	58	58	69	73	..	63.3	
Hannibal	Minimum	40	31	44	36	33	30	40	40	33	36	33	42	48	60	40	39	59	52	48	51	52	41	56	40	36	35	39	45	48	58	..	42.8	
Kansas City	Maximum	49	73	65	39	44	60	54	45	50	59	63	72	78	76	68	82	76	72	74	68	72	82	80	53	45	46	56	53	81	73	..	63.5	
Kansas City	Minimum	37	36	39	35	32	29	45	40	36	31	33	42	47	62	52	52	62	53	49	55	51	61	49	43	36	36	40	43	50	49	..	41.5	
Kidder	Maximum	46	58	69	44	41	56	51	45	50	57	59	68	76	75	69	73	72	70	74	67	66	80	80	74	41	45	50	54	69	69	..	61.7	
Kidder	Minimum	36	32	42	34	30	28	42	38	33	33	33	45	47	61	43	45	63	50	46	51	50	47	60	40	34	35	37	41	48	47	..	42.4	
Kirksville	Maximum	46	52	64	63	41	53	50	46	53	61	59	60	74	77	66	66	72	74	66	62	81	79	72	40	49	53	58	68	72	..	61.5		
Kirksville	Minimum	36	29	37	33	31	24	40	40	33	28	25	36	40	63	43	39	57	50	39	50	50	39	55	39	33	35	36	39	48	50	..	39.9	
Louisiana	Maximum	50	58	68	65	42	52	55	50	53	56	55	60	76	74	60	49	40	54	52	52	50	53	40	53	47	36	36	44	44	46	55	..	63.9
Louisiana	Minimum	42	33	40	38	35	28	40	40	30	29	31	40	42	60	49	40	54	52	50	53	40	53	47	36	36	44	44	46	55	70	..	42.7	
Macon §§	Maximum	47	55	68	37	43	54	54	47	51	57	60	63	72	80	60	68	80	73	76	61	68	84	82	50	40	50	56	58	69	71	..	61.2	
Macon §§	Minimum	37	29	29	35	31	26	29	40	33	32	33	31	41	50	43	40	41	51	48	41	49	41	42	43	34	31	36	38	44	49	..	38.7	
Maryville	Maximum	48	55	54	39	42	59	55	45	52	57	70	69	78	76	68	75	72	72	75	67	67	79	77	71	38	46	48	54	68	69	..	61.5	
Maryville	Minimum	36	33	39	30	29	27	42	36	31	29	35	47	42	61	40	45	57	47	43	50	48	47	57	38	33	35	41	47	43	..	40.7		
Mexico §§	Maximum	50	62	76	52	45	55	66	53	58	60	60	60	80	79	60	70	86	72	75	65	72	85	85	55	45	46	61	56	76	77	..	61.7	
Mexico §§	Minimum	32	29	34	28	32	27	30	40	34	32	30	38	40	52	46	40	45	52	44	51	50	43	53	44	35	34	36	39	43	48	..	39.4	
Moberly	Maximum	44	56	66	58	42	60	56	48	52	58	60	60	75	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	60.2	
Moberly	Minimum	37	27	44	33	32	27	41	40	34	32	30	43	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	138.7	
Oregon	Maximum	50	63	64	41	45	62	55	46	51	60	63	70	77	78	70	68	75	73	76	70	71	81	77	72	45	53	54	75	72	..	63.5		
Oregon	Minimum	35	34	40	31	30	30	42	36	33	31	36	49	49	61	45	49	54	49	49	51	49	54	63	36	34	33	37	41	50	43	..	42.5	
St. Joseph	Maximum	47	64	67	41	45	61	52	46	50	59	61	70	78	77	66	81	72	72	75	68	70	82	78	49	42	45	53	55	75	73	..	62.5	
St. Joseph	Minimum	36	35	38	33	31	32	43	38	36	33	36	50	50	61	46	49	58	53	49	54	51	53	48	40	35	35	38	43	49	46	..	43.3	
Trenton	Maximum	48	53	58	54	48	58	52	45	56	59	62	69	77	75	70	68	71	69	76	70	68	79	81	75	48	50	50	57	69	72	..	62.9	
Trenton	Minimum	36	32	41	34	31	25	41	40	33	29	31	41	45	61	42	43	62	50	45	52	50	44	56	40	34	35	36	42	47	48	..	41.6	
Unionville §§	Maximum	48	50	61	38	41	57	44	47	55	56	62	66	75	74	64	66	72	73	76	58	68	74	81	46	38	48	51	53	70	70	..	59.2	
Unionville §§	Minimum	30	31	32	33	30	26	27	39	33	31	32	36	42	46	41	40	44	48	47	51	50	39	42	40	33	33	35	38	42	48	..	38.0	
Warrenton	Maximum	54	64	78	76	40	55	59	53	55	60	64	79	75	73	66	89	87	71	72	67	81	81	79	52	46	57	74	73	..	..	..	66.6	
Warrenton	Minimum	41	31	44	39	33	29	41	42	34	33	33	43	48	59	48	38	57	51	51	49	53	47	59	48	39	34	40	43	48	55	..	43.7	
Southwestern Division																																		
Appleton City	Maximum	48	75	70	50	41	62	67	53	54	56	65	77	78	69	80	83	83	75	66	70	82	84	75	53	51	59	59	59	81	74	..	66.8	
Appleton City	Minimum	40	31	49	33	29	25	46	40	38	30	29	48	41	59	51	41	63	53	43	55	50	48	59	41	42	35	33	42	50	47	..	43.2	
Clinton	Maximum	52	76	68	53	40	60	64	57	53	56	64	65	76	77	75	82	85	75	72	68	82	76	52	48	57	60	82	76	..	..	..	66.5	
Clinton	Minimum	42	31	50	35	3																												







690

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No. 5.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

CLIMATOLOGICAL DATA

Earthquake.—16th in southeast part of State; felt as far north as Ferguson, St. Louis County.

Floods.—In Bourbeuse River 4-5th. In Black River 2d-4th. In Meramec River 1st-7th. In Mississippi River below the mouth of the Ohio 4-16th. In St. Francis River 2d-8th.

Fog.—Dense, 4th, 5th, 6th, 7th, 13th, 16th, 19th, 23d.

Frost.—Light, 14th.

(Continued on page 24)

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Columbia.....

Kansas City.....

St. Joseph.....

St. Louis.....

Springfield.....

Cairo, Ill.....

Keokuk, Iowa..

COMPARATIVE DATA FOR MAY

1888.....

1889.....

1890.....

1891.....

1892.....

1893.....

1894.....

1895.....

1896.....

1897.....

1898.....

1899.....

1900.....

1901.....

1902.....

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1925.....

1926.....

1927.....

1928.....

1929.....

1930.....

1931.....

1932.....

1933.....

1934.....

1935.....

1936.....

1937.....

Period.....

64.4

110

17

4.75

4.69

5.12

4.45

T.

9

14

9

8

690

48

No. 5.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

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Fog.—Dense, 4th, 5th, 6th, 7th, 13th, 16th, 19th, 23d.

Frost.—Light, 14th.

(Continued on page 24)

PRESSURE, WIND, HUMIDITY, AND SUNSHINE

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U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

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## Climatological Data for May 1937

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr						Precipitation, in inches				Number of days				Prevailing direction of wind	Observers	
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelted	With precip., .01 inch or more	Clear	Partly cloudy			Cloudy
Northern Division																				
Bethany	Harrison	916	42	64.1	+ 1.6	88	28	39	14	30	2.32	-1.85	1.22	0	9	17	8	6	se.	A. S. Cumming
Brunswick	Chariton	652	56	65.6	+ 1.4	92	29	43	14	33	3.32	-1.29	1.52	0	10	13	4	14	se.	O. K. Benecke
Chillicothe	Livingston	779	28	65.4	+ 2.5	92	29	43	14	34	3.94	-0.15	1.26	0	12	13	13	5	se.	Wm. J. Olchhouse
Clifton Hill	Randolph	731	38	64.6	+ 1.0	87	20†	36	14	32	2.94	-1.46	1.14	0	11	14	12	5	se.	Dr. A. J. Bradsher
Columbia	Boone	740	47	66.4	+ 2.1	91	29	46	15	29	4.67	+0.21	1.68	0	10	8	15	8	se.	U. S. Weather Bureau
Conception	Nodaway	980	48	65.0	+ 2.9	89	20	36	14	31	4.83	+0.77	3.09	0	7	11	17	3	se.	Fr. Adelm Hess
Downing	Schuyler	876	16	64.9 <sup>a</sup>	+ 2.2	90	29†	41	19	34	3.29	-1.87	1.27	0	8	10 <sup>b</sup>	13 <sup>a</sup>	7 <sup>a</sup>	se.	Everett Rowe
Edgerton	Platte	856	17	65.2	+ 2.2	88	18†	36	14	35	3.04	-1.16	0.81	0	9	18	5	8	se.	Fred L. Stiff
Elsberry	Lincoln	449	6	64.0	.....	91	29†	34	15	37	3.94	.....	1.29	0	8	5	23	3	se.	Ray E. Mills
Fayette	Howard	680	57	65.8	+ 2.0	91	28†	45	1†	33	4.36	+0.04	1.70	0	7	6	23	2	se.	Harry P. Mason
Fulton	Calhoun	818	49	66.8	+ 2.2	93	30	44	15	34	4.41	+0.19	1.18	0	9	13	10	8	se.	Clyde C. Herring
Gorin	Scotland	700	50	.....	.....	.....	.....	.....	.....	.....	4.86	+0.29	1.35	0	10	16	11	4	se.	W. L. Harker
Grant City	Worth	1,134	33	64.0	+ 2.0	89	20	35	14	31	5.05	+0.82	1.69	0	7	7	16	8	se.	Howard Rybolt
Hannibal	Marion	759	45	65.0	+ 1.4	89	29†	41	15	29	3.28	-1.07	0.94	0	8	5	10	16	se.	Hannibal Water Dept.
Kansas City	Jackson	741	48	67.2	+ 2.4	90	28	44	14	31	3.63	-1.02	1.26	0	12	8	10	13	sw.	U. S. Weather Bureau
Kidder	Caldwell	1,020	45	64.4	+ 1.8	87	20†	38	14	28	3.79	-0.86	1.61	0	11	13	13	5	se.	Roscoe L. Terry
King City	Gentry	1,095	11	.....	.....	.....	.....	.....	.....	.....	3.67	-0.54	2.05	0	8	4	22	5	se.	John M. Martin
Kirkville	Adair	969	48	65.0	+ 2.7	89	29	43	15	30	5.11	-0.22	2.31	0	10	9	16	6	sw.	Charles Noble
Linneus	Linn	816	5	.....	.....	.....	.....	.....	.....	.....	2.67	.....	0.91	0	14	14	10	7	se.	H. D. Taggart
Louisiana	Pike	469	43	63.2	- 0.5	90	29†	36	15	35	5.40	+0.70	1.50	0	7	12	13	6	w.	Stark Bro's Nurseries
Macon	Macon	875	38	64.5	+ 1.0	92	29	42	15	36	3.42	-1.17	1.05	0	9	14	8	9	w.	W. C. Brown
Maryville	Nodaway	1,169	47	64.4	+ 3.1	90	20	35	14	31	2.26	-2.39	1.04	0	10	11	7	13	s.	R. B. Montgomery
Mexico	Andrew	800	48	65.3	+ 1.3	92	29†	43	15	34	4.03	-0.57	1.30	0	9	20	0	11	w.	Mrs. Abbie Snoddy
Moberly	Randolph	875	0	66.0	.....	96	29	42	14	34	3.68	.....	1.69	0	10	19	6	6	e.	McCormick Hospital
Monroe City	Monroe	748	16	.....	.....	.....	.....	.....	.....	.....	3.79	-0.61	1.10	0	10	15	10	6	n.	J. S. Conway
Oregon	Holt	1,048	81	66.2	+ 3.0	91	20†	38	14	34	4.21	-0.32	2.56	0	13	15	10	6	se.	Miss Mina Wright
St. Charles	St. Charles	950	49	66.8	+ 3.7	94	30†	40	15	35	4.16	-0.12	1.03	0	10	23	6	2	se.	Martin L. Comann
St. Joseph	Buchanan	957	27	66.2	+ 2.0	91	28	40	14	29	3.93	-0.77	1.68	0	13	14	7	10	s.	U. S. Weather Bureau
Shelbina	Shelby	779	44	.....	.....	.....	.....	.....	.....	.....	3.70	-0.62	0.82	0	13	.....	.....	.....	.....	J. C. Jewett
Steffenville	Lewis	650	39	64.3	+ 0.5	89	29†	39	15	31	4.64	+0.07	1.40	0	9	13	13	5	e.	Frank Ifall
Tarkio	Atchison	916	34	64.0	+ 1.4	90	28	36	14	35	1.04	-3.50	0.40	0	7	14	9	8	se.	Albert Volker
Trenton	Grundy	822	41	65.4	+ 1.9	91	20	44	10	32	4.05	-0.65	2.32	0	10	11	14	6	s.	W. H. Estes
Unionville	Putnam	1,062	44	64.0	+ 1.9	90	30	42	9	34	4.85	-0.40	1.90	0	10	15	6	10	s.	John H. Schick
Warrenton	Warren	816	55	65.6	+ 0.7	91	29	41	15	30	3.63	-0.77	2.00	0	7	9	15	7	sw.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.	574	66	64.6	+ 0.8	90	29	43	15	28	2.85	-1.08	1.22	0	9	10	8	13	s.	U. S. Weather Bureau
<b>Division means and extremes</b>	<b>and extremes</b>	<b>.....</b>	<b>.....</b>	<b>65.1</b>	<b>+ 1.8</b>	<b>96</b>	<b>29</b>	<b>34</b>	<b>15</b>	<b>37</b>	<b>3.97</b>	<b>-0.72</b>	<b>3.65</b>	<b>0</b>	<b>9</b>	<b>12</b>	<b>11</b>	<b>8</b>	<b>se.</b>	<b>Rolla Brown</b>
Southwestern Division																				
Appleton City	St. Clair	853	42	66.6	+ 1.6	90	29†	41	14	35	6.12	+1.32	2.01	0	12	21	1	9	sw.	C. M. McCallister
Buffalo	Dallas	1,200	7	.....	.....	.....	.....	.....	.....	.....	4.56	.....	1.67	0	12	20	7	4	.....	Ozark Utilities Co.
Caplinger Mills	Cedar	765	11	.....	.....	.....	.....	.....	.....	.....	4.28	-0.59	1.71	0	8	17	5	9	se.	U. S. Weather Bureau
Clinton	Henry	750	44	66.7	+ 1.2	90	29	42	14	31	4.73	-0.10	2.78	0	11	.....	.....	.....	.....	Miss Ora Stratman
Concordia	Lafayette	784	22	.....	.....	.....	.....	.....	.....	.....	4.23	-0.52	1.56	0	8	19	4	8	s.	E. S. Taylor
Dean II	McDonald	1,000	33	67.2	+ 1.5	93	29	37	14	41	5.14	-0.61	1.73	0	8	9	15	7	sw.	E. H. Shepherd
Eldon	Miller	934	42	65.8	+ 1.6	90	28†	43	15	34	3.32	-0.98	1.16	0	10	2	29	0	e.	William H. Durham
Garber	Taney	950	2	65.9	.....	92	31	39	14	41	3.82	.....	1.50	0	7	14	3	14	e.	A. W. Madison
Hailey II	Barry	1,350	12	.....	.....	.....	.....	.....	.....	.....	4.08	-1.16	1.38	0	8	8	22	1	w.	John H. Patterson
Harrisonville	Cass	904	59	65.0	+ 1.2	89	18	41	14	35	4.07	-0.36	1.69	0	10	7	11	13	s.	Mrs. Frank Kliegel
Jefferson City	Cole	557	47	64.8	+ 0.1	89	29†	43	15	32	5.39	+0.98	1.50	0	8	11	16	4	e.	Jesse A. Mann
Lamar	Barton	980	49	67.0	+ 1.4	93	28†	41	14	34	3.96	-1.30	1.45	0	10	17	6	8	sw.	Mrs. Rosa E. Montelius
Lebanon	Laclede	1,265	49	65.6	+ 0.7	90	29	42	14	33	4.17	-1.04	1.75	0	10	11	15	5	sw.	Miss Carrie Loomis
Lexington	Lafayette	688	52	67.1	+ 2.7	91	28†	42	14	31	3.13	-1.83	1.12	0	14	14	14	3	sw.	Hubert A. Nieman
Lockwood	Dade	1,078	81	67.5	+ 3.1	89	20†	45	14	27	4.02	-1.30	1.42	0	11	15	14	2	sw.	Sec. Chamber of Commerce
Marshall	Saline	779	50	67.0	+ 2.8	91	18	43	14	37	4.10	-0.51	2.00	0	7	18	6	7	sw.	Mo. Fruit Exp. Sta.
Mountain Grove	Wright	1,463	36	65.8	+ 2.0	92	31	43	14	34	3.59	-0.87	1.52	0	9	13	14	4	se.	U. S. Fisheries Sta.
Ncosho	Newton	1,011	50	67.1	+ 1.1	90	28	38	14	36	2.94	-2.62	1.43	0	10	13	13	5	sw.	T. J. Kaupp
Nevada	Vernon	862	44	68.3	+ 3.8	91	19†	42	14	32	5.78	+0.85	3.00	0	9	13	11	7	sw.	Mrs. Laura S. Trader
Sedalia	Pettis	910	17	67.3	+ 2.0	90	20†	40	14	30	5.82	+1.23	1.95	0	9	9	11	11	s.	Floyd E. Fawver
Seligman	Barry	1,542	36	66.0 <sup>b</sup>	+ 1.5	87	30	44	3	30	3.99	-1.45	1.56	0	8	11 <sup>b</sup>	12 <sup>b</sup>	4 <sup>b</sup>	sw.	A. L. Hailey
Seymour (near)	Webster	1,642	31	66.9 <sup>b</sup>	+ 3.2	87	31	40	14	.....	3.97	-0.86	2.02	0	9	9 <sup>b</sup>	10 <sup>b</sup>	4 <sup>b</sup>	sw.	U. S. Weather Bureau
Springfield	Greene	1,301	49	65.8	+ 1.3	87	20	44	14	26	5.09	-0.10	1.83	0	10	9	16	6	s.	I. M. Wilson
Versailles	Morgan	1,037	5	66.0	+ 0.4	89	29	42	14	31	5.40	+0.70	2.72	0	9	9	14	8	s.	E. A. Markey
Warrensburg	Johnson	878	50	67.2	+ 2.2	90	29	41	14	31	3.62	-1.10	1.17	0	9	15	8	8	se.	Everett Martin
Warsaw	Benton	687	36	67.0	+ 1.5	91	28	41	14	36	5.44	+0.44	2.06	0	12	11	17	3	w.	
<b>Division means and extremes</b>	<b>and extremes</b>	<b>.....</b>	<b>.....</b>	<b>66.5</b>	<b>+ 1.8</b>	<b>93</b>	<b>28†</b>	<b>37</b>	<b>14</b>	<b>41</b>	<b>4.36</b>	<b>-0.76</b>	<b>3.00</b>	<b>0</b>	<b>10</b>	<b>13</b>	<b>12</b>	<b>6</b>		



## Daily Precipitation for May 1937

Stations	Drainage-basins	Day of month																															Total		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
Northern Division																																			
Amity	Grand		.10	1.36	.34				T.				T.	.74	.02																				
Bethany	do		.47	.23	.07				.13				.09									.05	.05	.18				.35	2.91					T.	6.15
Bowling Green	Mississippi		.47	1.40	.12	2.25	.02						.11								.06	.05	.97				1.12	.10							2.32
Brunswick	Grand		.25	1.52	.08	.18							.40	.05									.02	.23				.33	.26				.01		6.71
Canton	Mississippi		.85	.33	.04								.24	.01									.23					.33	.26					3.32	
Chillicothe	Grand		.20	1.26	.26	.04			.10				.66	.01									.23					.33	.26					4.24	
Clifton Hill	Chariton		1.14	.71	.05	.11			.10				.24	.02								.02	.26					.30	.82					3.94	
Columbin	Missouri	.05	1.64	.36	.42				.06				.21										.48					.05	.03					2.94	
Conception	do		.65	.52	.27				T.				.23															.19	.09					4.67	
Downing	Mississippi		.72	.57	.05	T.							.07															1.73	1.36					4.83	
Edgerton	Missouri		.37	.56	.07				.20				.50	T.														.46	1.27					3.29	
Edina	Mississippi		.68	.83	.05								.18															.51	.33					3.04	
Elsberry	do		1.15	.24	T.	.20							.12															.14	.29					3.78	
Farber	do		.45	.80	.32	.08							.15															.26	.04					3.94	
Fayette	Missouri		1.70	.49	.59				.09				.32															.10						3.76	
Fulton	do		1.10	.70	.30	.15	T.		.10				.35															.10						4.36	
Gallatin	Grand			1.55	.10								.16	.05															.51	.02				4.41	
Gorin	Mississippi		.88	.59	.03	T.							.16	.08															.30	.05				5.64	
Grant City	Grand		.58	.27	.57				T.				.15	T.														.20	1.09					4.86	
Hannibal	Mississippi		.70	.64	.09	T.	.02						.15	T.															.16	1.66				5.05	
Hermann	Missouri		.96	.67	.20	.03	.18						.33	.01															.68	T.				3.28	
Kahoka	Mississippi		.90	.60	T.								.20																.95	.10				3.43	
Kansas City	Missouri		.31	.36	.07				.08				.01																	.30				4.70	
Kidder	Grand		T.	1.07	.16	.01							.20	T.															.57	1.36				3.63	
King City	Missouri		.90	.32	.01	T.			.13	T.			.05																.14	1.61				3.79	
Kirksville	Mississippi		.52	.62	.16	.05							.30																.30	.21				3.67	
LaBelle	do		.72	.58	.12								.29	.09															.30	.21				5.11	
Linn	Grand		.10	.91	.04	.02			.05				.20	.02															.30	.21				3.76	
Louisiana	Mississippi		1.40		.15	.70							.10																.30	.21				2.67	
Lucerne	Grand			.59	.28	.01	T.						.06																.11	1.06	.02			5.40	
Macou	Chariton		.75	.60	.16	.11							.20																.38					2.87	
Madison	Mississippi		1.01	.49	.28	.07							.65	.04															.38					3.42	
Maryville	Missouri		.35	.42	.07				T.				.14																	.25				4.00	
Memphis	Mississippi		.37	.80	.19								T.	T.															.64	.45				2.26	
Mexico	do		1.22	.60	.32	.05							.35	.10															.08	1.45				3.45	
Milau	Grand		.02	.72	.21	.07							.21																.18	.65	.07			4.03	
Moberly	Mississippi		1.33	.36	.01	.02	.03	.30					.55																.23	.18	.65	.27		5.73	
Monroe City	do		1.10	.42		.09							.34	.03															.27	.03				3.68	
New London	do		.77	.44	.13	.03	.08						.19																.48	.03				3.79	
Oregon	Missouri		.33	.62	.22		.02						.18																.17	.12				3.19	
Palmyra	Mississippi		.75	.55	.12								.42																	.50				4.21	
Paris	do		1.03	.65	.20	.05	.06						.35																	1.06				3.64	
Perry	do		1.00	.16	.21								.31																	.78				4.16	
Philadelphia	do	.90	.72	.09	.12	.06							.08																	1.35				4.29	
St. Charles	Missouri		.72	.25	1.03	.18							.12																.43	.05	.02			3.29	
St. Joseph	do		.35	.58	.12	.05	T.		.12				.34	T.															.60					4.16	
Shelbina	Mississippi		.82	.53	.19	.25	.05						.26	.03															.21					3.93	
Shelbyville	do		.83	.52	.18	.45	.22						.90																.33					3.70	
Steffenville	do		1.40	.95	T.	.10							.37																.55	.30				4.83	
Tarkio	Missouri		.03		.03				.40				.02																.75	.10				4.64	
Trenton	Grand		.77	.52	.02				T.				.11	.03															.24	.22				1.04	
Troy	Mississippi		1.05	.55		.21	.08						.20																	.96				4.05	
Unionville	Chariton			.58	.42	.06							.20																	.23	.08			3.75	
Warrenton	Mississippi		2.00	.13		.09							.33	.04																.06	.74			4.85	
Waukegan, Ia.	do		.83	.14									.16	T.															.10	.74				3.63	
Southwestern Division																																			
Appleton City	Osage		.28	.41	.08				.08				T.	1.58	.02														.40	2.01				6.12	
Boonville	Missouri		1.20	1.08	.14	.44			.03				.38																	1.53				4.88	
Buffalo	Osage		.96	.10	.13	.08																													



Daily Precipitation for May 1937—Continued from preceding page

Stations	Drainage-basins	Day of month																															Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Southeastern Div.—Continued																																	
Crystal City	Mississippi	..	..	1.49	.21	.24	.06	..	..	..	..	..	.21	..	..	..	..	..	..	..	..	..	..	.28	T.	..	..	.30	..	..	..	..	2.79
Cuba	Meramec	..	1.22	1.18	..	..	..	..	..	..	..	..	.90	..	..	..	..	..	..	..	..	..	..	.72	..	..	..	..	..	..	..	..	4.02
Dexter	St. Francis	..	.16	.23	.29	.03	.04	.29	..	..	..	..	.35	.87	..	..	..	..	..	..	..	..	..	.20	..	..	..	..	..	..	..	..	3.46
Doniphan	Black	..	.39	.56	T.	.05	T.	..	..	..	..	..	.47	1.03	..	..	..	..	..	..	..	..	..	.22	..	..	..	..	..	..	..	..	2.75
Farmington	St. Francis	..	.10	1.77	.04	.34	.28	..	..	..	..	..	.10	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3.21
Fisk	do	..	T.	1.33	T.	..	.24	.33	..	..	..	..	.17	.72	T.	..	..	T.	.03	..	..	..	..	.13	..	..	.01	.05	..	.36	..	..	2.79
Fredericktown	do	..	..	.78	.61	.26	..	.15	..	..	..	..	.22	..	..	..	..	..	..	..	..	..	..	T.	..	..	..	..	..	..	..	..	2.19
Goodland	Black	..	1.30	..	..	.15	.10	..	..	..	..	..	.43	..	..	..	..	.08	..	..	..	..	..	.38	..	..	1.06	.07	..	..	..	..	3.57
Greenville	St. Francis	..	.24	.99	.07	.10	.16	..	T.	..	..	..	.24	..	..	..	..	.06	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1.95
Jackson	Mississippi	..	.22	.97	.03	.12	1.11	..	..	..	..	..	.10	.20	..	..	..	..	..	..	..	..	..	.03	..	..	..	..	..	..	..	..	3.18
Koshkonong	Black	..	.68	.29	..	.82	..	..	..	..	..	..	.17	.33	..	..	..	..	..	T.	..	..	..	..	..	..	..	..	..	..	..	..	3.56
Leeper	do	..	..	.78	.12	..	.17	.17	.15	..	..	..	.12	.14	.06	..	..	..	..	..	..	..	..	..	..	..	..	.81	..	..	..	..	1.75
Licking (near)	Gasconade	..	2.02	..	..	..	..	..	..	..	..	..	..	.78	..	..	..	T.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4.15
Marble Hill	Mississippi	..	.15	1.15	.40	..	.35	..	..	..	..	..	.25	.12	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2.71
Meramec Park	Meramec	..	.85	.75	.70	.08	.07	.03	..	..	..	..	.51	..	..	..	..	..	..	..	..	..	..	.05	..	..	..	..	..	..	..	..	3.53
Morehouse	Mississippi	..	.45	1.26	..	1.29	.30	..	..	T.	..	..	.09	.61	..	..	..	T.	..	..	..	..	..	.05	..	..	.04	..	..	..	..	..	4.38
New Madrid	do	..	1.50	.50	..	..	.33	.11	..	..	..	..	..	.59	.08	..	T.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3.33
Owensville	Gasconade	..	1.19	1.35	.33	.44	.23	..	..	..	..	..	.33	..	..	..	..	..	..	..	..	..	..	1.07	..	..	..	..	..	..	..	..	5.42
Parma	St. Francis	..	1.33	1.10	..	1.15	..	..	..	..	..	..	.12	.52	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3.22
Poplar Bluff	Black	..	..	.84	..	..	.06	.21	..	..	..	..	.34	.57	.05	..	..	..	..	..	..	..	..	T.	.05	..	..	..	..	..	..	..	2.12
Richwoods	Meramec	..	1.20	.90	.26	1.10	.34	..	..	..	..	..	.40	.01	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4.72
Rolla	do	..	20.19	.14	T.	.04	..	T.	T.	..	..	..	.03	.89	.01	..	..	T.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1.59
St. Louis***	Mississippi	..	.18	.97	.20	.04	.05	..	..	..	..	..	T.	.03	..	..	T.	..	..	.49	T.	..	..	..	..	..	..	..	..	..	..	..	2.65
St. Louis University*	do	..	.18	1.02	.26	.25	.18	..	..	..	..	..	.01	.03	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3.24
Salem	Meramec	..	.31	2.60	..	.18	.30	..	..	..	..	..	.32	.11	..	..	..	T.	..	..	.55	..	..	..	..	..	..	..	..	..	..	..	4.81
Sikeston	Mississippi	..	.12	1.10	.45	..	1.10	.20	..	..	..	..	.01	.77	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5.50
Union	Meramec	..	1.08	1.43	.10	.03	.10	..	..	..	..	..	.31	..	..	..	..	..	..	..	1.22	..	..	..	..	..	..	..	..	..	..	..	4.18
Valley Park	do	..	..	.69	.40	.35	T.	T.	..	..	..	..	.13	T.	..	..	T.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2.68
Van Buren	Black	..	.51	.67	..	.43	T.	..	..	..	..	..	.34	..	..	..	..	..	..	..	.04	..	..	..	..	..	..	..	..	..	..	..	1.95
West Plains	do	..	.68	.61	..	.02	..	..	T.	..	..	..	.06	.06	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2.01
Williamsville	do	..	..	.71	.28	.03	.97	.04	..	..	..	..	.22	.21	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2.58
Willow Sprgs. (near)	White	..	2.14	..	.03	.06	.02	..	..	.05	..	..	..	.08	.15	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3.26
Zalma	Mississippi	..	..	.62	.51	..	.21	..	..	..	..	..	..	.60	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1.99
Calro, Ill.***	do	..	.91	1.03	T.	..	.04	.88	..	..	..	T.	.42	.34	..	T.	..	T.	1.22	..	..	..	..	..	..	..	..	..	..	..	..	..	4.92

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. \*\* Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. T. Trace, or less than 0.01 inch.  
 \*\*\* Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. \* Precipitation in the next following measurement; separate dates of fall not recorded. \* Precipitation is for 24-hour period, midnight to midnight † Estimated. ‡ Partially estimated. |||| Incomplete.

Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for May 1937  
(See precipitation data in table on preceding page)

Station	Data	Day of month																															Monthly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Lakeside (Osage Dam)	Evaporation	209	133	012	058	075	181	240	175	075	228	273	172	083	228	210	178	228	142	307	276	355	055	128	261	240	205	099	214	269	322	271	5,902
	Mean temperature	60	56	59	60	60	60	62	61	62	60	66	66	58	58	60	67	61	70	72	76	70	66	65	67	74	72	75	80	76	78	76	66.3
	Wind movement	48	89	102	77	46	59	56	44	35	63	66	97	51	90	75	70	45	65	94	101	82	82	62	57	66	53	66	51	36	52	58	2,038

Observations taken at 7.30 a. m. Wind movement corrected to true velocities. For description see April 1932 report.  
 \*\*\* Evaporation in cloud in next measurement.

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Hail.—Light, 3d at Greenville, St. Charles, St. Louis, and St. Louis County; 4th at Fayette; 11th at Amity; 12th at Edgerton and south of Maryville; 21st at Warsaw; 25th at Amity, Steffenville, and in Daviess and Sullivan Counties; 26th at Grant City; 29th at Kansas City. Moderate hail, 1st at Rolla; 11th at Lexington. Heavy hail, 4th in parts of Howard County; 26th in north part of Nodaway County.

Halos.—Solar, 1st, 4th, 8th, 12th, 18th, 19th, 20th, 21st, 22d, 31st; lunar, 19th, 20th, 21st, 22d.

Sleet.—4th, 25th.

Thunderstorms.—Local, 6th, 7th, 13th, 15th, 16th, 17th, 19th, 20th, 27th, 28th, 29th, 31st; more or less general, 1st, 2d, 3d, 4th, 5th, 11th, 12th, 18th, 21st, 22d, 25th, 26th, 30th.

Tornado.—In the late afternoon of the 25th a small tornado struck the southeastern part of Daviess County. One person was killed and two injured, and nine houses and numerous barns and outbuildings, trees, and wires were damaged. (Amount of damage not available.) Upon reaching the Grand River the tornado apparently lifted and came down again in

Sullivan County, five miles south of Milan, where several houses were damaged, trees uprooted, and telephone wires put out of commission. Damage in Sullivan County estimated at \$10,000 to \$20,000.

Windstorms.—18th at Morehouse, St. Louis County, and Mississippi County; some minor damage; 21st at Farmington; 26th at Grant City, Macon, and Maryville; trees and buildings damaged at Grant City and Macon.

#### SEDALIA COOPERATIVE STATION

Official weather records began at Sedalia on April 1, 1937, with Mrs. Laura S. Trader in charge of the cooperative station. Records were kept at Sedalia many years ago; first, from 1878 to 1894, by Mr. T. O. Stanley, father of Mrs. Trader, and later, 1897-1907, by Dr. John W. Trader, father-in-law of Mrs. Trader. But for the last 30 years there had been no official records at Sedalia, the area having been represented by the cooperative station at LaMonte, about 13 miles west of Sedalia. The new station is a welcome addition to the climatological service in Missouri.



## Daily Temperatures for May 1937

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Northern Division																																	
Brunswick §§	Maximum	75	60	62	70	73	73	78	77	69	72	79	79	60	64	74	75	78	86	76	88	78	70	80	83	83	81	78	90	92	90	90	76.9
Brunswick §§	Minimum	47	48	53	54	51	49	50	54	56	46	47	58	53	43	46	49	52	54	55	55	62	60	49	52	58	64	59	64	60	68	67	54.3
Chillicothe §§	Maximum	74	58	63	70	73	75	81	76	69	71	78	79	59	65	72	73	79	81	72	89	78	72	81	82	78	81	78	91	92	88	67	76.5
Chillicothe §§	Minimum	48	54	53	52	50	48	53	55	51	44	55	56	51	43	46	49	50	55	54	55	61	55	48	54	54	64	59	61	67	68	66	51.3
Columbia	Maximum	74	61	60	71	71	71	76	71	71	70	80	73	59	63	74	79	77	86	78	88	74	69	77	80	84	78	82	88	91	89	89	75.9
Columbia	Minimum	49	54	54	55	52	50	49	46	54	53	45	53	59	53	49	46	55	52	57	55	62	61	55	50	61	66	67	61	66	70	71	56.9
Fayette	Maximum	75	66	59	68	70	71	78	71	70	72	81	78	70	65	75	76	78	69	89	81	71	79	80	84	85	79	82	91	91	89	90	77.2
Fayette	Minimum	45	54	53	52	50	49	46	54	53	45	53	59	52	48	45	49	58	54	60	66	57	47	54	63	62	56	63	64	68	62	54.5	
Grant City	Maximum	72	64	60	66	73	75	78	75	68	70	77	77	60	65	73	68	76	69	89	81	71	79	80	74	80	76	87	86	82	81	74.5	
Grant City	Minimum	43	54	52	53	48	51	51	56	44	44	55	49	46	35	49	48	59	52	60	63	53	48	56	63	61	54	60	66	69	68	53.4	
Hannibal	Maximum	72	66	64	70	70	69	70	76	73	68	77	75	71	59	67	78	77	80	70	80	79	71	78	80	82	78	80	85	89	89	88	75.2
Hannibal	Minimum	51	55	53	52	51	46	51	48	57	46	48	60	53	47	41	52	49	56	51	57	66	54	52	55	63	66	62	60	66	69	65	54.9
Kansas City	Maximum	73	59	61	67	74	77	78	74	68	74	80	80	61	71	79	72	79	88	79	89	76	72	79	81	83	82	82	90	89	81	87	76.9
Kansas City	Minimum	46	53	53	54	50	50	52	59	53	47	63	58	49	44	51	53	53	57	56	68	63	57	52	62	65	62	63	70	73	74	69	57.5
Kidder	Maximum	71	64	61	66	71	73	77	73	70	69	76	76	61	64	73	71	75	81	69	87	79	69	77	79	75	79	77	87	87	83	83	74.3
Kidder	Minimum	48	54	52	53	49	50	54	48	48	46	55	53	49	38	49	54	51	59	53	59	60	54	51	53	64	64	57	62	66	67	66	54.4
Kirksville	Maximum	73	73	62	71	73	73	75	77	71	73	76	78	66	65	72	74	79	78	72	85	82	78	81	80	79	80	76	87	89	87	88	76.5
Kirksville	Minimum	45	45	52	52	50	44	54	52	51	44	50	57	49	44	43	49	56	49	59	62	52	52	55	61	63	60	59	66	67	64	67	53.4
Louisiana	Maximum	77	69	60	70	74	70	75	80	74	70	76	60	60	65	70	79	80	75	75	80	70	70	80	80	80	80	78	85	90	90	90	75.2
Louisiana	Minimum	44	50	55	50	47	40	42	42	52	42	44	60	52	42	44	56	53	57	65	56	45	40	45	54	64	59	54	64	69	60	61	51.2
Macon §§	Maximum	74	61	61	70	72	71	74	77	70	76	80	59	64	73	77	79	84	72	88	79	72	82	82	82	81	80	78	90	92	91	91	76.5
Macon §§	Minimum	48	51	52	50	49	43	46	52	53	43	48	53	50	45	42	45	50	54	51	52	58	54	50	54	62	60	59	64	67	64	67	52.5
Maryville	Maximum	71	65	57	66	74	76	80	76	67	70	79	78	60	66	74	65	75	81	69	90	81	71	80	81	79	83	78	88	88	82	80	75.2
Maryville	Minimum	45	52	52	53	47	50	50	57	42	46	56	49	44	35	50	51	59	52	60	64	53	49	58	65	61	55	62	65	64	68	63	53.6
Mexico §§	Maximum	75	63	58	70	70	72	75	77	72	72	80	75	63	63	75	80	77	87	73	88	77	68	82	82	85	78	85	90	92	91	92	77.0
Mexico §§	Minimum	46	53	51	49	49	44	47	50	53	44	48	54	52	45	43	49	48	52	52	54	63	55	48	55	63	65	59	63	68	70	65	53.6
Moberly	Maximum	73	67	60	70	71	72	74	74	72	69	79	77	73	65	74	83	82	85	72	89	84	72	79	81	81	80	81	89	96	89	91	77.6
Moberly	Minimum	45	54	52	51	49	45	49	53	52	49	52	59	52	42	44	53	48	59	52	59	67	55	50	56	61	65	61	60	67	67	65	51.5
Oregon	Maximum	74	64	58	67	75	77	82	78	69	75	82	79	62	72	77	73	81	85	73	91	82	76	82	81	81	83	81	91	89	83	81	77.5
Oregon	Minimum	45	53	52	53	48	50	53	58	44	46	58	51	45	38	51	55	50	63	53	62	64	54	50	57	62	62	57	64	68	70	68	55.0
St. Charles §§	Maximum	74	62	70	75	72	76	72	78	74	71	77	75	66	59	73	83	82	88	72	81	81	74	84	83	86	81	89	92	91	94	94	78.4
St. Joseph	Maximum	74	60	61	68	75	75	80	74	69	72	81	78	62	69	77	67	78	85	72	90	79	74	79	79	74	81	79	91	89	81	80	75.9
St. Joseph	Minimum	45	53	53	54	50	52	52	59	48	47	59	56	48	40	53	53	57	55	65	63	56	53	59	61	65	61	66	70	70	68	56.4	
Trenton	Maximum	74	69	61	62	74	73	77	78	75	71	76	79	64	65	71	70	77	82	73	91	83	72	81	80	76	82	78	90	89	88	87	76.4
Trenton	Minimum	49	54	52	53	49	50	52	54	48	44	56	55	49	45	46	52	48	59	53	59	65	54	49	53	62	63	57	60	66	64	65	51.4
Unionville §§	Maximum	72	61	62	70	74	74	77	69	72	76	79	57	63	70	79	79	69	86	80	73	81	79	73	80	76	86	89	90	88	87	75.1	
Unionville §§	Minimum	48	53	52	52	49	46	52	52	42	46	52	54	48	43	44	48	49	54	59	52	52	55	61	62	57	59	65	69	66	63	53.0	
Warrenton	Maximum	71	67	65	71	69	69	72	77	71	69	74	72	72	58	71	79	78	86	82	83	80	70	78	81	83	80	84	86	91	90	89	76.4
Warrenton	Minimum	51	54	53	51	50	45	49	49	54	45	47	60	54	48	41	53	51	57	53	56	66	58	51	56	60	67	63	60	66	69	66	54.9
Southwestern Division																																	
Appleton City	Maximum	73	64	62	67	71	77	81	78	71	75	81	78	72	70	79	80	76	87	85	87	81	71	79	83	87	82	88	89	90	87	90	78.7
Appleton City	Minimum	48	52	49	52	49	47	46	57	56	46	58	58	52	41	45	50	53	58	59	63	60	51	47	54	63	64	59	65	63	67	61	51.6
Clinton	Maximum	71	66	60	66	70	74	79	76	72	74																						







## CLIMATOLOGICAL DATA

## MISSOURI SECTION

ROSCOE NUNN  
ST. LOUIS, MO.

19

Vol. XLI

JUNE 1937

No. 6

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## GENERAL SUMMARY

The monthly temperature averaged above normal in all Divisions. A rather cool period occurred about the 6-11th, and subnormal temperatures were again general during the last two days. The days from the 20-26th were unusually warm, especially in the Northern and Southwestern Divisions, with maxima ranging from 103° to 105°.

The average rainfall for the State was slightly greater than normal, but in the Northern Division there was a deficiency of 26 per cent. Rains were fairly general the first two decades. They were heavy to excessive on the 9-10th at a number of stations, especially in the southern portion. These heavy rains caused local floods, considerable damage to crops, especially small grains, and to fields by erosion. The greatest 24-hour fall officially recorded, was 5.45 inches at Bragg City.

The month was generally favorable for agriculture. Corn made good progress, but cultivation was delayed by rains, and many fields were weedy till near the close of the month. The general condition of the corn crop was good to excellent, but fair to poor in only scattered areas. Wheat prospects were generally excellent, but in the west-central portion there was considerable damage by rust and some fields were too poor to cut. By the close of the month the harvesting of wheat was in full swing. Truck and garden crops made good progress. Fruits continue unusually promising in most sections.

Minor floods occurred on the 10-12th in the Bourbeuse and the Meramec, and a moderate flood on the 10-13th in the Osage.—H. C. G.

## TEMPERATURE

The monthly mean temperature for the State, 73 stations reporting, was 74.4°, or 0.8° above normal. The highest monthly mean was 79.4° at Caruthersville, and the lowest monthly mean was 71.0° at Bethany and Grant City. The highest temperature recorded was 105° at Oregon on the 25th, and the lowest was 43° at Arcadia on the 7th. The greatest daily range was 45° at Arcadia on the 7th.

## PRECIPITATION

The average precipitation for the State, 131 stations reporting, was 4.93 inches, or 0.31 inch more than normal. The greatest local monthly amount was 10.46 inches at Doniphan, and the least local monthly amount was 1.55 inches at Bethany. The greatest amount in any twenty-four hours was 5.45 inches at Bragg City on the 10th. The average number of days with 0.01 inch or more of precipitation was 10.

## MISCELLANEOUS PHENOMENA

Dust.—Locally on 25th.

Floods.—In Bourbeuse River 11-12th; in Meramec River 10-12th; in Osage River 10-13th.

Fog.—Dense, 9th, 10th, 11th, 23d, 28th.

Hail.—Light, 6th at Jackson, 7th, six miles south of Linneus, 10th at Caruthersville and Dean, 13th at Brunswick, 18th at Edgerton, 26th at Doniphan. Moderate, 6th at Mountain Grove, with damage to fruit estimated at 30 per cent. Heavy, 4th, nine miles south of Perryville, Perry County, with considerable damage to crops and gardens; 6th, near Jackson with damage to crops estimated at \$40,000; 14th, south of Garber.

Halos.—Solar, 3d, 5th, 6th, 8th, 14th, 15th, 20th, 22d; lunar, 23d.

Thunderstorms.—Local, 6th, 7th, 11th, 17th, 19th, 25th, 26th, 28th, 29th; more or less general, 1st, 2d, 3d, 4th, 5th, 8th, 9th, 10th, 13th, 14th, 15th, 16th, 18th, 27th.

Windstorms.—1st, 3d, 9th, 12th, 14th, 25th, 26th, 27th. One person injured and minor damage to trees, wires, roofs, chimneys, and window glass at St. Louis and in St. Louis

(Continued on page 29)

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind			Relative humidity			Percentage of sunshine	
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12 noon		6:30 p. m.
Columbia.....	29.92	30.28	11	29.61	5	6.9	24	ne.	13	84	60	63	61
Kansas City.....	29.91	30.27	11	29.54	4	8.7	26	nw.	2	81	56	57	69
St. Joseph.....	29.92	30.30	11	29.56	4	7.9	27	w.	5	83	55	54	66
St. Louis.....	29.94	30.29	11	29.62	4	10.2	43	sw.	1	77	57	57	61
Springfield.....	29.94	30.26	11	29.59	4	8.0	43	nw.	9	83	63	61	64
Cairo, Ill.....	29.94	30.28	11	29.68	4	7.2	28	sw.	3	81	57	60	73
Keokuk, Iowa...	29.93	30.32	11	29.60	5	6.9	26	n.	25	79	55	58	75

## COMPARATIVE DATA FOR JUNE

Year	Temperature			Precipitation					Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy
1888.....	72.6	103	36	5.81	5.98	5.96	5.50	0	7	..	..	..
1889.....	70.7	100	38	4.66	4.29	4.57	5.13	0	6	..	..	..
1890.....	77.2	106	44	2.45	3.14	2.49	1.71	0	6	..	..	..
1891.....	73.2	103	46	6.56	5.61	7.99	6.08	0	13	..	..	..
1892.....	74.5	100	45	3.09	3.04	3.72	2.52	0	7	15	9	..
1893.....	72.6	98	40	4.72	4.92	3.91	5.32	0	9	12	12	..
1894.....	74.5	105	35	3.74	4.28	4.92	2.03	0	7	16	11	..
1895.....	73.3	100	42	5.87	6.07	6.33	5.20	0	10	12	11	..
1896.....	72.5	101	45	3.98	3.32	3.63	5.00	0	9	12	11	..
1897.....	73.6	102	38	6.25	6.49	5.74	6.51	0	11	13	12	..
1898.....	75.3	100	49	5.92	6.32	6.54	4.90	0	12	9	14	..
1899.....	74.3	101	42	3.92	3.71	4.83	3.21	0	11	13	12	..
1900.....	73.3	103	44	5.05	3.71	5.06	6.37	0	10	12	12	..
1901.....	77.9	106	40	2.02	2.67	1.47	1.92	0	6	18	10	..
1902.....	70.9	100	37	6.42	6.64	6.95	5.68	0	12	11	10	..
1903.....	67.3	95	36	3.28	2.96	3.78	3.09	0	9	15	9	..
1904.....	70.5	93	45	6.68	5.31	8.23	6.51	0	11	12	12	..
1905.....	75.2	103	42	3.14	2.84	3.06	3.52	0	7	15	10	..
1906.....	72.7	101	40	4.82	3.28	6.62	4.55	0	10	15	9	..
1907.....	71.2	97	40	5.47	5.76	6.40	4.24	0	11	14	10	..
1908.....	72.3	98	43	6.01	6.92	6.78	4.33	0	11	13	10	..
1909.....	73.9	98	48	5.23	5.96	5.78	3.95	0	11	11	13	..
1910.....	70.4	99	38	4.11	3.08	4.69	4.57	0	8	16	7	..
1911.....	78.9	112	43	1.76	0.93	1.59	2.77	0	12	11	10	..
1912.....	69.5	100	42	4.77	3.31	5.39	5.62	0	9	14	8	..
1913.....	75.4	107	33	2.55	3.01	2.31	2.32	0	6	18	8	..
1914.....	79.3	106	43	2.26	3.11	2.50	1.17	0	5	18	7	..
1915.....	70.8	98	38	6.45	7.53	7.24	4.57	0	12	11	10	..
1916.....	70.0	100	42	5.86	5.05	6.50	6.04	0	13	14	9	..
1917.....	71.0	103	35	3.67	5.72	2.20	3.10	0	8	19	7	..
1918.....	77.2	110	48	3.09	3.04	3.20	3.04	0	8	17	8	..
1919.....	75.0	104	44	5.58	5.04	6.24	5.47	0	11	14	10	..
1920.....	72.7	104	41	2.35	3.09	2.14	1.83	0	6	18	7	..
1921.....	76.6	105	44	5.81	4.74	7.74	4.96	0	12	12	10	..
1922.....	76.5	108	43	1.61	1.72	1.39	1.72	0	5	19	8	..
1923.....	73.5	103	45	5.56	5.30	6.52	4.87	0	11	14	9	..
1924.....	72.5	101	38	7.27	8.53	7.70	5.57	0	14	12	12	..
1925.....	76.5	103	46	5.99	7.68	4.99	6.31	0	9	15	10	..
1926.....	70.9	101	37	3.60	5.02	3.79	1.99	0	8	15	9	..
1927.....	70.3	99	41	5.81	5.38	6.77	5.28	0	10	15	7	..
1928.....	67.7	91	40	11.25	8.59	11.03	14.12	0	15	8	11	..
1929.....	71.3	99	39	5.69	6.57	5.98	4.52	0	10	16	8	..
1930.....	72.4	109	36	3.77	5.17	4.63	1.52	0	7	18	8	..
1931.....	77.1	107	40	2.75	4.09	1.81	2.35	0	6	19	8	..
1932.....	75.2	103	47	1.81	5.53	6.09	2.62	0	10	12	12	..
1933.....	78.4	107	38	1.47	2.89	0.92	0.61	0	3	22	6	..
1934.....	80.4	108	47	2.82	2.92	2.72	2.83	0	7	17	10	..
1935.....	69.6	98	39	8.95	6.73	11.06	9.07	0	15	9	12	..
1936.....	76.5	112	40	1.42	1.30	1.38	1.57	0	4	21	6	..
1937.....	74.4	105	43	4.93	3.43	5.79	5.56	0	10	14	10	..
Period.....	73.6	112	33	4.62	4.63	4.98	4.25	0	9	15	9	6



## Climatological Data for June 1937

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches				Number of days				Prevailing direction of wind	Observers	
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelted	With precip., .01 inch or more	Clear	Partly cloudy			Cloudy
Northern Division																				
Bethany.....	Harrison.....	916	42	71.0	+ 1.0	100	23†	48	9	33	1.55	-3.51	0.74	0	4	22	5	3	se.	A. S. Cumming
Brunswick.....	Chariton.....	652	56	74.0	+ 1.0	102	25	50	10	32	3.39	-1.72	1.35	0	11	14	5	11	ne.	O. K. Benecke
Chillicothe.....	Livingston.....	779	28	73.2	+ 0.9	103	25	50	6†	33	4.17	-0.56	1.53	0	9	16	10	4	e.	Win. J. Olenhouse
Clifton Hill.....	Randolph.....	731	38	73.0	+ 0.6	101	25	50	10	29	4.35	-0.04	1.54	0	14	13	9	8	sw.	Dr. A. J. Bradsher
Columbia.....	Boone.....	740	47	74.2	+ 1.4	99	25	52	10	26	4.01	-0.75	1.14	0	13	12	8	10	s.	U. S. Weather Bureau
Conception.....	Nodaway.....	980	48	72.0	+ 0.5	102	24†	47	9	34	1.91	-3.04	0.50	0	7	19	17	4	se.	Fr. Adelhelm Hless
Downing.....	Schuyler.....	876	16	72.5	+ 1.1	102	25	49	9†	33	3.89	-1.30	1.74	0	6	16	10	4	s.	Everett Rowe
Edgerton.....	Platte.....	856	17	73.4	+ 1.5	102	24†	48	30	39	2.12	-2.75	0.76	0	8	18	5	7	s.	Fred L. Stiff
Elsberry.....	Lincoln.....	449	6	73.0	.....	100	25	51	7	31	6.70	.....	2.20	0	11	9	16	5	ne.	Ray E. Mills
Fayette.....	Howard.....	680	57	73.6	+ 0.8	98	24†	50	7	34	4.32	-0.25	1.55	0	9	10	11	9	s.	Harry P. Mason
Fulton.....	Callaway.....	818	49	74.6	+ 1.4	99	24†	52	10	34	5.52	+1.12	1.65	0	11	13	11	6	s.	Clyde C. Herrling
Gorin.....	Scotland.....	700	50	.....	.....	.....	.....	.....	.....	.....	3.61	-1.06	1.52	0	7	16	11	3	ne.	W. L. Harker
Grant City.....	Worth.....	1,134	33	71.0	+ 0.2	100	24	46	9	31	2.87	-2.13	0.81	0	6	12	10	8	se.	Howard Kybolt
Hannibal.....	Marion.....	759	45	72.6	+ 0.1	98	24	49	10	28	1.84	-2.06	0.83	0	12	8	14	8	n.	Hannibal Water Dept.
Kansas City.....	Jackson.....	741	48	75.8	+ 2.2	100	24	52	10	26	3.73	-1.26	1.67	0	9	6	14	10	sw.	U. S. Weather Bureau
Kidder.....	Caldwell.....	1,020	45	72.4	+ 0.6	103	25	49	6†	30	2.78	-2.19	0.91	0	9	13	12	5	ne.	Roscoe L. Terry
King City.....	Gentry.....	1,095	11	.....	.....	.....	.....	.....	.....	.....	1.92	-3.39	0.50	0	7	2	26	2	sw.	John M. Martin
Kirksville.....	Adair.....	969	48	72.4	+ 0.7	100	25	49	10	32	2.07	-2.99	0.77	0	8	12	16	2	sw.	Charles Noble
Linneus.....	Linn.....	816	5	.....	.....	.....	.....	.....	.....	.....	4.48	.....	1.38	0	9	14	10	6	sw.	H. D. Taggart
Louisiana.....	Pike.....	469	43	72.5	+ 0.4	101	25	48	11	36	3.45	-0.78	1.15	0	10	16	8	6	s.	Stark Bro's Nurseries
Macon.....	Macon.....	875	38	72.9	+ 0.5	102	25	48	11	34	2.34	-2.38	1.03	0	9	17	8	5	nw.	W. C. Brown
Maryville.....	Nodaway.....	1,169	47	71.9	+ 2.1	103	24	46	9	32	2.00	-3.11	0.66	0	8	12	7	11	se.	R. B. Montgomery
Mexico.....	Audrain.....	800	48	73.8	+ 0.6	100	24†	49	10	30	5.38	+0.64	1.80	0	11	20	2	8	e.	Mrs. Abbie Snoddy
Monroeville.....	Randolph.....	875	0	72.4	.....	96	25†	49	10	29	3.82	.....	1.92	0	12	12	9	8	ne.	McCormick Hospital
Monroe City.....	Monroe.....	748	16	.....	.....	.....	.....	.....	.....	.....	2.35	-2.73	0.95	0	10	16	6	8	n.	J. S. Conway
Oregon.....	Holt.....	1,018	81	73.2	+ 1.0	105	25	48	10	31	1.84	-3.53	0.68	0	8	15	13	2	se.	Miss Mina Wright
St. Charles.....	St. Charles.....	520	49	75.6	+ 1.7	101	24	54	10†	31	9.10	+5.10	2.89	0	13	16	7	7	s.	Martin L. Comann
St. Joseph.....	Buchanan.....	957	27	73.9	+ 0.2	103	24	50	9	28	1.64	-3.31	0.48	0	10	14	9	7	e.	U. S. Weather Bureau
Shelbina.....	Shelby.....	779	44	.....	.....	.....	.....	.....	.....	.....	2.52	-1.96	0.73	0	11	.....	.....	.....	.....	J. C. Jewett
Steffenville.....	Lewis.....	650	39	72.2	- 0.4	100	25	48	11	31	3.40	-1.14	0.81	0	11	16	13	1	s.	Frank Hall
Tarkio.....	Atchison.....	916	34	71.6	- 0.2	104	24	45	9	31	2.21	-2.75	0.59	0	6	8	18	4	sw.	Albert Volker
Trenton.....	Grundy.....	822	41	72.7	+ 0.5	102	25	50	6†	33	2.95	-2.09	0.55	0	11	14	12	4	n.	W. H. Estes
Unionville.....	Putnam.....	1,062	44	71.4	+ 0.1	101	25	49	9†	32	1.95	-3.24	0.90	0	7	14	3	13	s.	John H. Schick
Warrenton.....	Warren.....	816	55	73.4	0.0	96	24†	52	10	28	9.23	+5.45	3.37	0	13	9	14	7	sw.	Prof. A. W. Ebeling
Keokuk, Iowa.....	Lee, Ia.....	574	66	72.4	- 0.1	99	25	51	9	27	2.14	-1.99	0.85	0	9	7	11	12	sw.	U. S. Weather Bureau
Division means and extremes		.....	.....	73.0	+ 0.7	105	25	45	9	39	3.43	-1.20	3.37	0	9	13	11	6	s.	
Southwestern Division																				
Appleton City.....	St. Clair.....	853	42	75.0	+ 0.6	99	26	50	6	32	5.00	-0.02	1.75	0	10	19	2	9	sw.	Rolla Brown
Buffalo.....	Dallas.....	1,200	7	.....	.....	.....	.....	.....	.....	.....	7.00	.....	2.66	0	10	21	7	2	.....	C. M. McCallister
Caplinger Mills.....	Cedar.....	750	11	.....	.....	.....	.....	.....	.....	.....	4.54	-1.62	1.54	0	10	17	4	9	se.	Ozark Utilities Co.
Clinton.....	Henry.....	765	44	75.0	+ 1.2	100	26	52	6†	30	4.11	-0.79	2.67	0	9	.....	.....	.....	.....	U. S. Weather Bureau
Concordia.....	Lafayette.....	784	22	.....	.....	.....	.....	.....	.....	.....	1.84	-3.64	0.53	0	7	15	6	9	e.	Miss Ora Stratman
Dean H.....	McDonald.....	1,000	33	75.8	+ 3.1	99	27	46	7	40	7.61	+1.68	2.52	0	8	19	5	6	sw.	E. S. Taylor
Eldon.....	Miller.....	934	42	74.2	+ 1.2	96	1†	53	10†	29	6.80	+2.76	2.90	0	11	8	10	12	n.	E. H. Shepherd
Garber.....	Taney.....	950	2	75.2	.....	99	23†	46	7	37	4.54	.....	1.49	0	9	15	6	9	e.	William H. Durham
Hailey H.....	Barry.....	1,350	12	.....	.....	.....	.....	.....	.....	.....	7.81	+2.21	2.39	0	7	12	18	0	w.	A. W. Madison
Harrisonville.....	Cass.....	904	59	72.8	- 0.3	98	24	50	6†	26	4.68	-0.11	1.79	0	7	8	7	15	sw.	John H. Patterson
Jefferson City.....	Cole.....	557	47	73.2	- 0.6	96	24†	52	10†	30	5.06	+0.83	1.98	0	9	14	7	9	w.	Mrs. Frank Kliegel
Lamar.....	Barton.....	980	49	77.0	+ 2.8	103	26	52	6	33	8.55	+3.01	4.40	0	7	21	3	6	sw.	Jesse A. Mann
Lebanon.....	Laclede.....	1,265	49	74.6	+ 1.9	98	26	53	6†	29	8.32	+3.15	1.74	0	13	10	13	7	sw.	Mrs. Rosa E. Montelius
Lexington.....	Lafayette.....	688	52	75.5	+ 2.6	102	23†	51	10	31	2.80	-1.75	0.78	0	11	12	15	3	w.	Miss Carrie Loomis
Lockwood.....	Dade.....	1,078	31	75.4	+ 1.8	98	26	52	6	27	8.81	+3.13	3.07	0	9	16	10	4	sw.	Hubert A. Nieman
Marshall.....	Saline.....	779	50	74.2	+ 1.0	98	24†	51	10	32	4.86	+0.06	2.42	0	10	11	14	5	sw.	Sec. Chamber of Commerce
Mountain Grove.....	Wright.....	1,463	36	74.5	+ 2.7	96	26	49	7	33	7.02	+2.08	1.61	0	13	15	10	5	s.	Mo. Fruit Exp. Sta.
Neosho.....	Newton.....	1,011	50	75.7	+ 1.9	97	26†	51	30	35	3.85	-2.12	2.25	0	10	21	4	5	sw.	U. S. Fisheries Sta.
Nevada.....	Vernon.....	862	44	76.7	+ 3.2	101	26	52	6	28	6.82	+1.37	1.50	0	8	17	8	5	sw.	T. J. Kaupp
Nedalia.....	Pettis.....	910	17	75.0	+ 0.8	99	26	52	10	28	3.75	-1.53	1.06	0	11	14	7	9	n.	Mrs. Laura S. Trader
Seligman.....	Barry.....	1,542	36	73.5	+ 1.1	92	23†	50	7	27	4.29	-0.66	1.58	0	8	17	10	2	sw.	Floyd E. Fawver
Seymour (near).....	Webster.....	1,642	31	71.6	- 0.1	93	25	48	7	29	6.68	+1.34	1.35	0	12	13	7	10	sw.	A. L. Hailey
Springfield.....	Greene.....	1,301	49	74.9	+ 2.4	95	25	58	6	25	9.39	+4.71	2.90	0	10	13	9	8	s.	U. S. Weather Bureau
Versailles.....	Morgan.....	1,037	5	74.4	- 0.3	96	25†	52	10	27	7.40	+2.57	2.50	0	10	13	7	10	sw.	I. M. Wilson
Warrensburg.....	Johnson.....	878	50	75.0	+ 1.1	101	26	51	10	30	3.47	-1.59	0.96	0	10	13	6	11	se.	E. A. Markey
Warsaw.....	Benton.....	687	36	76.0	+ 2.2	100	26	53	7†	31	5.71	+0.41	2.98	0	10	12	16	2	e.	Everett Martin
Division means and extremes		.....	.....	74.8	+ 1.4	103	26	46	7	40	5.79	+0.81	4.40	0	10	15	8	7	sw.	
Southeastern Division																				
Arcadia.....	Iron.....	926	56	73.2	+ 1.4	93	24†	43	7	45	5.41	+1								



## Daily Precipitation for June 1937

Stations	Drainage-basins	Day of month																														Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		..
Northern Division																																	
Amity III	Grand		.30	.12		.68	T.			.23	.02			.88				.04	.16														
Bethany	do	.03								.34				.74																			2.48
Bowling Green III	Mississippi		.02	.15	.14	.31	.39		.04	.40	.88	T.		.67			.01	.05										T.	T.				1.55
Brunswick III	Grand		.78		.13	.48				.23	.10		.05	1.35	.10			.03	.02										.28				3.34
Canton III	Mississippi		.02	.01		.16	.03		.06	.04	.03			.75	.08			.15	.71										.12				3.39
Chillicothe III	Grand		.21	T.	.02	.28		T.		.46	.07	T.		1.53					.37										.37				2.41
Clifton Hill	Chariton	.06	.41	.20	.04	.24		.13		.12	.10			1.54	.20	.05	.03		.72										.15	.72			4.17
Columbia**	Missouri	.02	.57	.63	.48	.22			.13	1.14	.13			.57	.03	.01	.06		.08										1.15	.08			4.35
Conception	do		.36			T.	.20			.07	.36			.42			.26	.24											T.	T.		.02	4.01
Downing	Mississippi	1.74	T.			.09		T.	T.	.11				.46																			1.91
Edgerton	Missouri	.03	.35			.25			.43	.76	.02			.03			T.		.25		.02										T.		3.89
Edina III	Mississippi		.37	.12	T.	.05				.12	.03			.75	.58			.40	.28														2.12
Elberberry	do	.22		.07	2.20	.26				2.00	.22			.29	.17			.05	.27											.43			3.13
Farber III	do		.56	T.	.30	.40	.32			.70	.40			1.30																.95			6.70
Fayette	Missouri		.77	.77	.41	.45				.19	.11	T.		1.43	.12				.14											.31			4.43
Fulton III	do		.58	.41	.57	.16	.12			1.65	.82			.40	.02		.05	T.												.07			4.32
Gallatin II	Grand		.50	.23		.69				.60	.05			.95				.22												.74			5.52
Gorin	Mississippi		.76			.22			T.	.15				.72			1.52				.05												3.24
Grant City	Grand		.44			.81			.21	.39				.70			T.													.19			3.61
Hannibal III	Mississippi		.25	.20	T.	.05	.02		.06	.06	.13	T.		.56	.27			.02	.07											.32			2.87
Hermann II	Missouri		.12	.29	.60	.28	.14			2.26	2.20			.92			.01													.15			1.84
Kahoka III	Mississippi		1.25	T.		T.	.30			.35	.10			.72			30	1.08												1.40	.02		8.24
Kansas City**	Kidder	.45	1.22	.04	.11	.14		T.	.73	.37	T.			.91			T.	.65	T.	.02													4.10
Kidder III	Grand		.44	.03	.05	.42		T.	.02	.53	.20	T.		.91			T.				.18									T.			3.73
Kirkville	Missouri	.10				.45		T.		.33	.08			.50			.44	.02												T.			2.78
LaBelle III	Mississippi		.18			.12				.16	.28			.77				.22	.01														1.92
Linneus III	do		.06	.39		.32	.08					.11		1.01	.10		.51	.02												.33			2.07
Louisiana	Grand		.90		.02	.09				.35	.09			1.05			.20													.39			2.99
Lucerne III	Mississippi		.20	.10		.25			.40	1.15	.20			.75			.20													.09			4.48
Macon II	Grand		.17	T.	.04	.64				.50				.80				.05												.20			3.45
Madison III	Chariton		.21			.20	.02			.10	.14			1.03			.10	.05												.03		.06	2.29
Maryville	Mississippi		.03	.02	.15	.86	.11		.46	.10	.11			1.36	.34		.12	.39												.49			2.34
Mexico II	Missouri	.05	.61		T.	.18			.22	.29			T.	.51			.07	.07												.39			4.44
Memphis III	Mississippi		.30	.04	T.	.03				.12	.03			.50			.80	.12															2.00
Mexico II	do			.08	.03	.03				.72	.23	.01		1.70	.10		.60	.15															1.94
Mifflin II	Grand		.27	.24		.41				.26	.14			.49	.23		.08													1.73			5.38
Moberly	Mississippi		.05	.13	.05	.30		.08		.05	.07			1.92	.37	.04		.20													10		2.22
Monroe City	do	.16		.03	.02	.29		.15		.23				.95	.07		.19													.56			3.82
New London III	do		.21	.07	T.					.12	.52	.03		1.02		.12														.26			2.35
Oregon	Missouri		.19		.02	.25		T.	.40	.12	.07			.68			.11													.07			2.16
Palmyra III	Mississippi					.35			.37					1.40			.10																1.84
Paris III	do			.95	.19	.15	.12		.08	.10	.13	.01		1.46	.52		.19	.05												.13			2.22
Perry III	do			1.43	.35	.04			.12	T.	.39			.45	.40		.24													.09			4.04
Philadelphia III	do					.55			.21					.25	.35	.05	.15	.04												.49			3.55
St. Charles III	Missouri	.20		.03	2.89	.15	.20			2.05	1.48	.01		.86	.90		.11	.04												.18			2.09
St. Joseph**	do	.12	.36	T.	.01	.16		T.	.36	.04				.39			.13	.04	.03														9.10
Shelbina III	Mississippi				.12	.46	.23		.02	.19	.04			.73	.35		.19	.02															1.64
Shelbyville III	do					.46				.29	.12			.97	.12		.19													.17			2.52
Steffenville	do	.17		T.	.03	.45		.07		.22	.08			.81	.77	.05	.10													.55			2.70
Turkio	Missouri		.57						.23	.14				.30		.59														.65			3.40
Trenton	Grand	.48	.40	.07	T.	.52		.01	.13	.23	.01			.55		.38														.38			2.21
Troy III	Mississippi		.10		.76	.06	.23			1.60	1.10			.36		.38		.09	.03														2.95
Unionville III	Chariton		.16	.18		.25				.20				.90			.06													.78			5.11
Warrenton	Mississippi	.45	.30	.60	1.30	.07	.49		.30	3.37	.63			.74	.32		.04	.45												T.		.20	1.95
Keokuk, Ia. **	do	T.	.02	T.	T.	.28		T.	.06					.37		.85			.01											.47			9.23
Southwestern Division																																	
Appleton City	Osage		T.	.97	.07	.11			.80	1.75	.43			.01	.52		.04	.30															



## Daily Precipitation for June 1937—Continued from preceding page

Stations	Drainage-basins	Day of month																																Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	..		
Southeastern Div.—Concluded																																		
Crystal City	Mississippi	.61	.22	.20	.36	.37				1.98	1.09				.03		.84	.03	.08										.35		T.	.12	6.28	
Cuba	Meramec		.41	.75	.70					1.75	.73																						4.34	
Dexter	St. Francis			.05	1.28	.28					1.98					1.67	.47	T.		.24											T.		5.97	
Doniphan	Black	.10	.30	.08	.92	.04				.95	3.83					.05	.66	.50	T.			.24							1.32	1.39	.11	.07	10.46	
Farmington	St. Francis	.01	.34	.69	.18	.42	.16		T.	.52	.86	.01				.01	.53	.17	.05	.23									T.	.09		.18	.14	4.45
Fisk	do		T.	T.	1.07	1.03			T.	T.	3.62					.34	.17	.09														.49	6.81	
Fredericktown	do		1.23	T.	.66		.46				1.77					.87	.77	.05	.18														5.99	
Goodland	Black	.05		.82	.30	.34	.45				.81	1.13				.10	.99		.16										.39				5.54	
Greenville	St. Francis		T.	.12	.18	1.05	.19				.44	1.19				.40	.36												T.	T.			3.93	
Jackson	Mississippi				.07	1.06	.56				.40	1.60					1.27												.03			.10	5.09	
Koshkonong	Black			.15	.02	.27			.60	.53	1.84					.06	.16	.75												T.	1.60		5.98	
Leeper	do																																	
Licking (near)	Gasconade	.44	.23	.75	.11				.99	.50				.18		.02				.38													3.60	
Marble Hill	Mississippi		.04		.40					1.30	1.70					.40	.35														.05		4.24	
Meramec Park	Meramec	.23	.07	.25	.10					1.90	1.60					.03	.08	.07	.08														4.41	
Morehouse	Mississippi			1.08	.31	1.08	.04		.42	.64	.92						.17			T.										T.		.20	4.86	
New Madrid	do	.13	.03	1.13	.28	.19					1.73	.04				.04		.13															3.70	
Owensville	Gasconade		1.15	.10		.26				3.81	.86					.27	.26	.13															6.84	
Parma	St. Francis			.35	1.20	.90					1.75	.05				.67	.02	.20	2.15														7.27	
Poplar Bluff	Black		T.	.05	.16	1.12	.09			T.	3.71					1.12	.49		.09												.25		7.08	
Richwoods	Meramec		.16	.10	.60	.12	.10			1.50	2.00			.10		.39	.15	T.	1.53		.08									.12			6.42	
Rolla	do	1.20	.40	.09	.22	.02	.38		T.	1.30	.98					.39	.15	T.	1.53		.08												6.74	
St. Louis***	Mississippi	.76	.06	.34	.27	.27			.01	3.39	.45				.06	.01	T.	.07	.02											.11	T.	.02	5.84	
St. Louis University*	do	.64	.06	.35	.42	.29			.10	2.63	.64				.09	.02	.01	.07	.02											.11			5.45	
Salem	Meramec		.18	.18	.03	.08				.82	.75	.02				.14	.39	.03		T.													2.62	
Stikeston	Mississippi		.30	.41	1.25	.49	.02				1.15						.02	.26		.93											.87		4.83	
Union	Meramec	.29	.47	.37	.31	.55				1.43	1.59					.03	.03														.19	T.	.05	5.94
Valley Park	do	.22	T.	.33	.09	T.				1.75	1.60	T.		T.	1.39	T.	.05	.41	.48														6.56	
Van Buren	Black	.34		1.13	T.	.68					.51	2.00				T.		.35												.42	.49		5.92	
West Plains	do		.28	.64	.12	.15			.83	.98	2.66					.81	.15	1.25												T.	.04	.03	7.94	
Williamsville	do			.46	.15	.56	.28				.02	2.54					.32	.30		.15										.92	.78		6.48	
Willow Sprgs. (near)	White			.02	.09	.32	.11			1.16	1.62					T.	.35	.41													.23		.65	4.36
Zalma	Mississippi					.51	.10				2.03						1.02	.58		.24												.20	4.68	
Cairo, Ill.***	do	T.	T.	.95	.35	.08	T.			.62	.68					T.	T.	.13	T.		T.								.02	T.	T.	.23	3.06	

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. || Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. T. Trace, or less than 0.01 inch.  
 \*\*\* Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. \*\* Precipitation in the next following measurement; separate dates of fall not recorded. \* Precipitation is for 24-hour period, midnight to midnight. † Estimated. ‡ Partially estimated. |||| Incomplete.

## Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for June 1937

(See precipitation data in table on preceding page)

Station	Data	Day of month																														Monthly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Lakeside ..... (Osage Dam)	Evaporation .....	.283	.231	.318	.105	.152	.209	.279	.216	.....	.067	.143	.252	.288	.362	.088	.184	.109	.242	.254	.346	.369	.308	.335	.357	.335	.330	.163	.296	.306	.....	7.422
	Mean temperature ..	78	75	69	72	72	65	67	68	66	62	66	74	78	76	71	74	76	79	81	81	84	78	80	84	84	84	80	78	75	68	74.9
	Wind movement ..	54	35	76	61	63	86	73	44	59	89	64	66	105	82	89	54	61	48	40	40	77	66	40	52	53	45	44	41	43	49	1.799

Observations taken at 7.30 a. m. Wind movement corrected to true velocities. For description see April 1932 report.

\*\*\*\* Evaporation included in next measurement.

## Continued from page 26

County on the 1st. Wheat was lodged in the county. On the 9th a windstorm at Springfield did damage to trees, wires, roofs and buildings estimated at \$50,000.

## UNUSUALLY HEAVY RAINFALL

Unusually heavy rains on the 9-10th in the east-central portion of the State, particularly in the Meramec and Bourbeuse watersheds, caused smaller streams and creeks to overflow, ruining crops in the bottoms and causing widespread damage by erosion of the soil. Many fields had to be replanted or abandoned. Wheat and other small grain crops were a total loss where the strong current of water laid them flat and the sediment covered them with mud. Much farm machinery was washed away and lost and fences carried away.

Heavy rainfall of cloudburst proportions fell in the Indian Creek Valley, in Newton and McDonald counties, on the 15th, sending a three-foot wall of water down the valley, carrying away bridges, culverts, livestock, small buildings, and crops of small grain that had been cut, and flattening other crops that were still standing in fields. Damage was reported as thousands of dollars. Newspapers published the rainfall as more than six inches in a three-hour period at Stella, Newton County.

## NEW STATION, LAWSON, MO.

A cooperative climatological station was established at Lawson, Ray County, on June 22, with Mr. Elmer E. Lamb in charge. This station will represent a considerable area to the northeastward of Kansas City that hitherto has not had a weather station, and will furnish valuable information in connection with climatic investigations and reports for Missouri.



## Daily Temperatures for June 1937

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	..	Mean		
Northern Division																																		
Brunswick §§.....	Maximum...	89	83	70	80	77	75	79	78	59	66	74	83	86	81	76	83	86	89	95	94	93	93	100	100	102	97	80	88	84	82	..	84.1	
Brunswick §§.....	Minimum...	66	67	64	64	65	54	57	56	51	52	57	62	64	63	65	63	65	69	70	75	65	68	72	76	75	68	68	66	57	..	63.8		
Chillicothe §§.....	Maximum...	87	81	72	81	74	74	79	77	60	68	75	85	88	81	79	84	82	88	96	94	94	101	101	103	89	86	88	84	81	..	84.1		
Chillicothe §§.....	Minimum...	62	64	62	62	62	50	54	57	53	50	52	57	62	62	61	63	60	67	68	72	74	63	68	74	77	71	64	59	62	53	..	62.2	
Columbia .....	Maximum...	87	89	70	82	79	75	80	83	64	66	70	83	88	84	76	79	87	88	93	93	93	88	94	98	99	94	80	86	81	79	..	83.7	
Columbia .....	Minimum...	69	66	62	62	59	55	56	57	53	52	59	59	64	68	63	66	64	69	69	75	76	66	69	77	77	75	67	66	63	58	..	64.7	
Fayette.....	Maximum...	87	89	74	82	80	74	80	84	70	65	72	83	87	82	77	83	86	88	95	93	92	87	97	98	98	94	87	84	83	78	..	84.3	
Fayette.....	Minimum...	68	65	62	62	65	53	50	53	55	51	57	57	63	65	62	64	60	67	68	71	74	63	63	73	73	74	69	65	62	56	..	63.0	
Grant City .....	Maximum...	80	76	73	76	73	72	75	70	60	72	72	83	85	80	80	80	82	85	94	93	92	88	99	100	99	81	81	81	84	81	..	81.6	
Grant City .....	Minimum...	59	64	60	54	56	48	49	52	46	50	53	58	62	58	61	69	60	66	68	73	70	66	68	74	73	67	63	68	56	50	..	60.5	
Hannibal .....	Maximum...	86	84	75	83	81	73	78	80	71	67	75	80	85	83	79	79	80	84	90	92	89	86	92	98	97	94	84	85	82	77	..	83.0	
Hannibal .....	Minimum...	66	65	61	63	66	55	53	55	54	49	51	55	64	65	61	66	62	62	64	64	76	72	64	76	72	61	62	63	54	..	62.2		
Kansas City .....	Maximum...	88	84	72	79	73	76	80	78	59	63	75	87	89	81	80	83	88	94	95	94	97	94	100	100	93	82	82	82	84	81	..	84.9	
Kansas City .....	Minimum...	66	66	64	64	59	54	60	59	53	52	60	65	72	66	65	65	65	67	72	77	76	76	72	77	80	81	73	68	64	58	..	66.6	
Kidder .....	Maximum...	83	88	72	76	73	72	76	73	64	65	67	83	86	83	78	81	81	87	93	92	92	91	100	99	103	96	80	89	87	80	..	83.0	
Kidder .....	Minimum...	61	65	60	59	57	49	52	56	51	49	55	58	59	61	62	63	61	66	70	73	73	65	70	75	76	70	62	60	61	53	..	61.7	
Kirksville .....	Maximum...	85	80	72	81	76	78	77	75	65	70	75	80	84	84	83	79	80	85	83	88	92	90	88	92	100	100	93	82	82	82	84	..	83.6
Kirksville .....	Minimum...	61	63	59	63	62	52	50	57	50	49	50	54	63	63	60	63	60	63	67	73	73	65	70	75	76	70	62	60	61	53	..	61.4	
Louisiana .....	Maximum...	92	87	73	83	83	75	80	75	73	65	75	80	87	80	75	80	85	83	88	92	90	88	92	100	100	93	82	82	82	84	..	83.6	
Louisiana .....	Minimum...	68	62	60	62	62	56	50	50	50	50	50	54	63	63	60	63	60	63	67	73	73	65	70	75	76	70	62	60	61	53	..	61.4	
Macon §§.....	Maximum...	87	85	71	84	79	74	79	81	58	67	77	84	93	83	81	81	84	85	94	95	93	91	99	100	102	97	81	82	85	82	..	84.5	
Macon §§.....	Minimum...	63	64	60	61	63	52	53	57	53	49	48	51	60	63	60	62	59	64	61	66	73	62	65	75	77	74	66	60	63	52	..	61.3	
Maryville .....	Maximum...	81	78	73	74	70	72	76	74	59	69	68	83	86	82	78	79	80	87	97	96	94	90	102	103	102	85	82	88	84	81	..	82.5	
Maryville .....	Minimum...	60	64	61	55	59	48	47	53	46	49	53	59	62	59	62	63	61	68	70	74	71	66	70	76	77	67	62	60	61	57	..	61.3	
Mexico §§.....	Maximum...	91	90	85	83	83	75	80	81	62	63	76	85	85	85	81	83	85	90	95	96	95	90	95	100	100	95	85	85	80	80	..	85.4	
Mexico §§.....	Minimum...	68	65	63	64	54	60	54	55	55	49	51	55	61	63	61	64	61	64	65	70	75	62	65	72	75	74	62	63	63	54	..	62.2	
Moberly .....	Maximum...	92	83	75	78	74	71	75	78	70	65	75	83	82	77	80	84	86	92	90	90	88	94	95	96	96	90	86	81	80	..	*82.6		
Moberly .....	Minimum...	65	65	62	60	65	55	50	56	53	49	50	55	64	65	59	61	60	65	65	73	74	61	65	74	72	74	67	61	63	52	..	*62.3	
Oregon .....	Maximum...	86	81	78	78	72	74	79	75	58	72	69	87	87	82	81	88	93	97	97	96	93	103	104	105	86	83	91	86	86	..	84.9		
Oregon .....	Minimum...	62	65	61	56	54	49	54	56	49	48	54	59	61	59	63	62	63	62	73	74	72	72	76	76	68	61	61	61	55	..	61.6		
St. Charles §§.....	Maximum...	90	84	72	87	85	79	84	82	64	65	79	84	91	91	81	84	89	89	94	96	94	94	95	101	100	98	82	89	85	82	..	86.3	
St. Joseph .....	Maximum...	70	69	67	65	67	60	55	53	63	54	54	55	64	67	63	66	66	67	72	76	65	64	73	75	72	64	69	65	57	..	64.9		
St. Joseph .....	Minimum...	86	79	75	76	69	74	78	74	58	69	70	86	88	80	80	81	86	94	97	97	96	93	102	103	102	86	82	89	85	85	..	84.0	
Trenton .....	Maximum...	87	78	75	78	73	78	76	65	70	75	82	89	85	76	84	86	95	94	94	91	101	101	102	95	80	90	85	81	81	..	84.2		
Trenton .....	Minimum...	61	64	60	61	59	50	52	56	50	51	50	54	61	62	60	62	60	63	67	71	73	64	68	74	76	70	64	59	61	54	..	61.2	
Unionville §§.....	Maximum...	85	79	73	80	78	71	71	72	55	72	77	82	81	80	79	83	84	92	92	93	89	88	100	101	82	81	82	82	81	..	81.9		
Unionville §§.....	Minimum...	59	62	60	62	60	50	51	56	49	49	52	51	63	61	59	63	57	61	67	73	68	66	73	77	70	65	60	65	54	..	60.8		
Warrenton .....	Maximum...	86	85	78	84	81	78	77	82	75	61	74	81	86	86	75	78	82	82	88	86	90	96	96	96	93	89	83	81	77	..	83.1		
Warrenton .....	Minimum...	67	67	65	63	67	57	54	54	60	52	61	55	64	66	62	66	63	65	65	72	75	63	65	72	75	72	61	67	65	55	..	63.8	
Southwestern Division																																		
Appleton City .....	Maximum...	90	90	76	77	71	75	83	85	67	63	78	87	90	86	81	85	90	95	95	93	97	92	98	97	97	99	87	88	86	83	..	86.0	
Appleton City .....	Minimum...	67	65	62	61	59	50	51	55	57	52	59	63	71	65	64	64	65	69	70	70	72	69	68	71	72	71	69	65	66	58	..	64.0	
Clinton .....																																		







MS  
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# CLIMATOLOGICAL DATA

19  
**MISSOURI SECTION**  
ROSCOE NUNN  
ST. LOUIS, MO.  
Vol. XLI JULY 1937 No. 7  
PRICE: 5 CENTS A COPY; 25 CENTS A YEAR

## GENERAL SUMMARY

This was the most nearly normal July in Missouri, both for temperature and rainfall, in the last eight years, or since 1929; for in all of the preceding seven years the temperature was decidedly above normal and the rainfall deficient. In 1934 July average temperature for the State was 86.2° (highest of record) and in 1936 almost as high (85.3°), while in 1937 it is 77.9°, or almost exactly normal. Temperatures this month were fairly uniform over the State, but were slightly higher in the western half than in the east. And there were no very marked periods of warm or cool weather; the notably warm periods were the 4-16th and 29th-31st, and the principal period of subnormal temperatures was the 17-28th.

Rainfall was quite unevenly distributed in the several showery periods, and totals of rainfall for the month show wide variations. In the southern third of the State and the northern third rainfall was generally more than 3 inches, up to 5 inches or more in considerable areas, and up to 7 inches or more in some localities in the southeastern and northwestern counties. But in a wide central belt extending from Pike, Lincoln, St. Charles, and St. Louis counties westward to Jackson and Cass counties the rainfall amounted to less than 3 inches and in much of this belt it was but little more than 2 inches, while in Pike, Lincoln, St. Charles, and St. Louis counties it was generally less than 1 inch.

Crop conditions generally were good, except for very damaging rust in wheat in the west-central counties. Corn was good to excellent.

River stages were somewhat below normal during most of the month. A light flood occurred in the Grand River at Chillicothe on the 14-15th and again on the 20th.

## TEMPERATURE

The monthly mean temperature for the State, 75 stations reporting, was 77.9°, or 0.1° below normal. The highest monthly mean was 81.4° at Kansas City, and the lowest monthly mean was 74.3° at Greenville. The highest temperature recorded was 105° at Lamar on the 5th, and the lowest was 45° at Greenville on the 1st. The greatest daily range was 44° at Clinton on the 9th.

## PRECIPITATION

The average precipitation for the State, 134 stations reporting, was 4.06 inches, or 0.37 inch more than normal. The greatest local monthly amount was 10.90 inches at Fisk, and the least local monthly amount was 0.67 inch at St. Louis. The greatest amount in any twenty-four hours was 10.33 inches at Fisk on the 4th. The average number of days with 0.01 inch or more of precipitation was 8.

## MISCELLANEOUS PHENOMENA

Floods.—In Grand River at Chillicothe, 14-15th, 20th.  
Hail.—Light, 3d at Centerville, 4th at Fulton, 5th at Seligman, 6th at Nevada, 8th at Seligman, 15th at Edgerton and Lawson, 23d at Brunswick and Linneus, 24th at Lawson, 25th at Springfield. Moderate, 4th at Farmington and in southeastern Washington County, 15th at Kidder, 24th at Clifton Hill with some damage. Heavy, 5th near Seligman (severe damage in Arkansas), 6th at Lockwood, 15th near Oregon with damage

to corn, fruit, and gardens, 18th near Bethany, 25th at Brunswick with unestimated damage to corn, melons, buildings, automobile tops, and window glass.

Halos.—Solar, 9th, 12th, 17th, 24th; lunar, 12th, 13th, 14th, 15th, 16th, 26th.

Thunderstorms.—Local, 2d, 6th, 7th, 22d, 28th, 30th, 31st; more or less general, 3d, 4th, 8th, 9th, 10th, 11th, 12th, 13th, 14th, 15th, 16th, 17th, 18th, 19th, 23d, 24th, 25th, 29th.

(Continued on page 34)

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind			Relative humidity			Percentage of sunshine	
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12 noon		6:30 p. m.
Columbia.....	29.95	30.16	27	29.67	13	6.4	27	ne.	18	80	52	54	76
Kansas City.....	29.93	30.14	26	29.59	13	8.0	45	nw.	15	78	45	46	78
St. Joseph.....	29.93	30.16	26	29.58	13	7.2	30	nw.	15	78	49	48	78
St. Louis.....	29.97	30.17	28	29.75	14	9.8	29	sw.	16	72	47	52	69
Springfield.....	29.97	30.14	10	29.73	13	8.5	27	n.	19	82	57	55	72
Cairo, Ill.....	29.98	30.18	10	29.79	19	7.1	24	n.	16	83	53	60	78
Keokuk, Iowa..	29.96	30.15	27	29.67	14	5.5	31	ne.	8	75	48	51	81

## COMPARATIVE DATA FOR JULY

Year	Temperature			Precipitation					Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy
1888.....	79.3	111	50	2.85	4.44	1.50	2.62	0	7	..	..	..
1889.....	77.1	107	46	4.02	4.22	3.80	4.03	0	8	..	..	..
1890.....	79.6	110	42	3.04	3.12	3.90	2.10	0	5	..	..	..
1891.....	72.7	103	45	3.23	4.13	4.16	1.41	0	8	..	..	..
1892.....	75.8	102	45	4.88	5.27	4.95	4.43	0	9	12	10	9
1893.....	77.3	103	51	4.67	4.72	6.19	3.10	0	8	14	12	5
1894.....	76.5	109	42	2.67	1.48	3.43	3.11	0	5	18	10	8
1895.....	74.4	106	45	6.77	6.36	6.91	7.03	0	10	10	12	9
1896.....	77.3	108	48	5.51	7.53	4.34	4.66	0	9	15	11	5
1897.....	78.7	106	48	3.14	4.11	2.70	2.62	0	6	19	9	3
1898.....	76.1	104	42	5.72	5.00	5.71	6.44	0	9	16	10	5
1899.....	76.0	102	43	4.50	4.88	4.32	4.30	0	9	15	11	5
1900.....	76.9	102	46	4.15	3.91	4.58	3.96	0	8	17	10	4
1901.....	85.4	116	46	2.02	2.23	1.93	1.90	0	5	19	10	2
1902.....	77.0	103	50	4.10	5.95	4.54	1.80	0	8	17	11	3
1903.....	77.4	102	51	3.40	2.79	3.56	3.85	0	8	17	10	4
1904.....	74.2	100	47	4.61	4.86	5.32	3.65	0	10	15	11	5
1905.....	73.4	101	48	8.07	4.86	9.90	9.46	0	12	12	10	9
1906.....	74.7	100	48	3.54	2.33	4.11	4.19	0	8	17	9	5
1907.....	78.4	105	51	4.56	6.62	3.78	3.28	0	8	19	8	4
1908.....	76.5	101	49	3.36	3.36	3.09	3.64	0	8	18	9	4
1909.....	76.7	102	41	6.16	7.01	6.33	5.14	0	10	17	8	6
1910.....	76.8	109	46	5.79	4.79	4.59	7.99	0	9	16	9	6
1911.....	78.0	113	43	3.68	3.41	4.78	2.86	0	8	16	9	6
1912.....	78.8	104	52	2.88	2.15	2.53	3.95	0	7	18	9	4
1913.....	80.2	108	47	3.10	2.52	2.86	3.93	0	7	18	9	4
1914.....	80.5	109	45	2.67	2.48	3.98	1.56	0	7	17	9	5
1915.....	74.6	102	42	5.74	9.05	4.39	3.78	0	12	14	9	8
1916.....	81.6	109	52	1.22	1.28	1.01	1.36	0	3	25	5	1
1917.....	77.5	107	42	3.08	1.71	3.36	4.18	0	8	20	8	3
1918.....	77.1	110	41	1.62	1.98	1.89	1.00	0	6	19	8	4
1919.....	80.0	105	50	2.30	3.00	2.21	1.69	0	5	23	6	2
1920.....	76.3	105	47	3.30	3.69	3.17	3.05	0	7	18	8	5
1921.....	80.3	109	46	2.32	2.29	2.39	2.28	0	5	20	8	3
1922.....	76.8	103	46	5.50	6.87	5.57	4.06	0	8	17	9	5
1923.....	78.2	105	50	3.16	2.61	4.29	2.59	0	6	18	8	5
1924.....	73.3	103	40	5.55	4.42	6.65	5.57	0	10	15	11	5
1925.....	77.9	106	46	2.70	2.56	2.76	2.79	0	7	16	10	5
1926.....	78.0	108	40	3.07	3.66	2.54	3.02	0	7	17	9	5
1927.....	75.8	101	48	4.16	2.82	5.38	4.28	0	8	18	9	4
1928.....	77.2	102	48	2.93	3.47	3.15	2.16	0	7	17	10	4
1929.....	77.8	104	50	4.03	5.50	2.58	4.01	0	8	16	10	5
1930.....	81.2	113	42	1.00	0.50	1.48	1.01	0	3	22	7	2
1931.....	80.3	110	49	3.31	2.83	3.45	3.65	0	7	18	9	4
1932.....	79.8	109	48	3.61	3.89	4.08	2.85	0	7	19	8	4
1933.....	79.3	108	49	2.67	1.73	2.44	3.84	0	5	18	9	4
1934.....	86.2	117	48	1.18	0.82	1.22	1.50	0	4	20	9	2
1935.....	80.8	104	53	3.30	3.90	2.06	3.94	0	6	20	9	2
1936.....	85.3	118	44	1.52	0.72	1.48	2.37	0	3	23	6	2
1937.....	77.9	105	45	4.06	4.80	3.34	4.05	0	8	17	11	3
Period.....	78.0	118	40	3.69	3.77	3.77	3.52	0	7	18	9	4



## Climatological Data for July 1937

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches				Number of days				Prevailing direction of wind	Observers	
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelted	With precip., .01 inch or more	Clear	Partly cloudy			Cloudy
Northern Division																				
Bethany	Harrison	916	42	77.3	+ 1.0	98	4	52	1	34	5.15	+0.99	1.24	0	9	25	3	3	se.	A. S. Cummling
Brunswick	Chariton	652	56	79.0	+ 2.9	98	5	58	1	32	5.17	+1.06	2.60	0	9	18	5	8	se.	O. K. Benecke
Chillicothe	Livingston	779	28	78.7	+ 1.7	98	4†	56	26	34	6.48	+3.06	2.31	0	7	21	8	2	sw.	Wm. J. Olenhouse
Clifton Hill	Randolph	731	38	78.1	+ 1.7	96	10†	56	27	30	5.58	+2.22	2.01	0	7	20	7	4	e.	Dr. A. J. Bradsher
Columbia	Boone	740	47	79.0	+ 2.1	96	10	56	27	28	2.92	-0.57	1.13	0	9	11	18	2	e.	U. S. Weather Bureau
Conception	Nodaway	980	48	78.8	+ 2.2	99	6	58	2	31	7.50	+2.83	2.10	0	9	18	13	0	se.	Fr. Adelhelm Hess
Downing	Schuyler	876	16	77.4*	+ 1.0	99	10	54	1	35	4.65	+0.84	1.54	0	7	17	11*	2	s.	Everett Rowe
Edgerton	Platte	856	17	79.1*	+ 3.0	101	4	53	26	40	5.83	+2.33	3.17	0	7	24	1	6	s.	Fred L. Stiff
Elsberry	Lincoln	449	6	76.1	.....	95	16	48	27	36	0.86	.....	0.41	0	4	12	19	0	ne.	Ray E. Mills
Fayette	Howard	680	57	77.2	0.0	96	13†	53	27	33	4.93	+1.68	2.60	0	7	10	17	4	e.	Harry P. Mason
Fulton	Callaway	818	49	78.7	+ 1.0	96	4†	54	27	31	2.28	-1.01	1.07	0	8	18	9	4	sw.	Clyde C. Herring
Gorin	Scotland	700	50	.....	.....	.....	.....	.....	.....	.....	4.01	+0.40	1.86	0	5	25	5	1	se.	W. L. Harker
Grant City	Worth	1,134	33	77.3	+ 1.1	97	6†	52	2	39	7.25	+2.62	3.09	0	8	8	15	8	se.	Howard Rybolt
Hannibal	Marion	759	45	77.2	+ 0.4	94	10	55	1	28	8.92	+5.83	4.78	0	8	11	13	7	se.	Hannibal Water Dept.
Kansas City	Jackson	741	48	81.4	+ 3.3	103	4	61	26	34	3.11	-1.02	0.99	0	10	11	16	4	sw.	U. S. Weather Bureau
Kidder	Caldwell	1,020	45	77.7	+ 1.1	98	6	58	2	34	7.85	+3.97	2.66	0	7	19	8	4	se.	Roscoe L. Terry
King City	Gentry	1,095	11	.....	.....	.....	.....	.....	.....	.....	7.91	+4.37	3.84	0	8	1	28	2	sw.	John M. Martin
Kirksville	Adair	969	48	77.9	+ 1.9	98	7	54	1	31	3.82	-0.48	1.06	0	8	14	13	4	sw.	Charles Noble
Lawson	Ray	1,050	0	78.2	.....	98	4	56	26	34	7.50	.....	3.82	0	11	16	13	2	se.	Elmer E. Lamb
Linneus	Linn	816	5	.....	.....	.....	.....	.....	.....	.....	4.06	.....	1.34	0	7	22	7	2	sw.	H. D. Taggart
Louisiana	Pike	469	43	76.2	- 0.2	97	14	48	27	36	1.35	-2.25	0.60	0	5	16	13	2	w.	Stark Bro's Nurseries
Macon	Macon	875	38	78.2	+ 1.0	100	10	56	2	36	5.01	+1.60	1.55	0	4	24	6	1	w.	W. C. Brown
Maryville	Nodaway	1,169	47	77.9	+ 2.2	97	4†	56	26	35	7.78	+2.55	3.69	0	8	16	8	7	se.	R. B. Montgomery
Mexico	Audrain	800	48	79.3	+ 2.0	100	4	57	26†	33	3.13	-0.08	2.05	0	7	24	0	7	e.	Mrs. Abbie Snoddy
Moberly	Randolph	875	0	76.8	.....	98	7	52	27	35	3.01	.....	1.10	0	8	23	5	3	sw	McConnick Hospital
Monroe City	Monroe	748	16	.....	.....	.....	.....	.....	.....	.....	6.37	+2.71	3.92	0	6	17	7	7	ne.	J. S. Conway
Oregon	Holt	1,048	81	80.0	+ 4.4	101	4†	58	26	35	7.20	+3.02	3.19	0	8	27	3	1	sw.	Miss Mina Wright
St. Charles	St. Charles	520	49	79.2	+ 1.1	97	13†	54	27	35	0.93	-2.06	0.43	0	7	27	3	1	se.	Martin L. Comann
St. Joseph	Buchanan	957	27	80.5	+ 3.1	100	4	60	26	31	7.89	+4.11	3.01	0	9	19	10	2	se.	U. S. Weather Bureau
Shelbina	Shelby	779	44	.....	.....	.....	.....	.....	.....	.....	3.72	-0.15	1.48	0	6	.....	.....	.....	.....	J. C. Jewett
Steffensville	Lewis	650	39	77.0	- 0.8	99	10	53	2	37	6.40	+2.29	2.45	0	7	17	12	2	s.	Frank Hall
Tarkio	Atchison	916	34	77.0	+ 0.2	100	4	57	2†	38	10.36	+6.21	4.82	0	7	17	12	2	sw.	Albert Volker
Trenton	Grundy	822	41	78.3	+ 1.5	98	10	54	2	37	5.30	+1.23	1.34	0	9	21	8	2	s.	W. H. Estes
Unionville	Putnam	1,062	44	77.7	+ 1.2	99	5	56	26	34	2.51	-1.58	0.86	0	4	18	7	6	s.	John H. Schlick
Warrenton	Warren	816	55	77.0	- 0.8	93	10†	55	1	26	2.76	-0.38	1.44	0	9	9	19	3	sw	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.	574	66	77.9	+ 1.0	96	10	58	1	27	5.31	+1.93	2.03	0	13	8	16	7	sw.	U. S. Weather Bureau
Division means and extremes		.....	.....	78.1	+ 1.4	103	4	48	27	40	4.80	+1.03	5.77	0	8	17	10	4	se.	
Southwestern Division																				
Appleton City	St. Clair	853	42	78.1	- 0.1	99	4	54	26	35	2.20	-2.11	1.14	0	7	21	7	3	sw.	Rolla Brown
Buffalo	Dallas	1,200	7	.....	.....	.....	.....	.....	.....	.....	3.95	.....	2.39	0	7	25	5	1	.....	C. M. McCallister
Caplinger Mills	Cedar	750	11	.....	.....	.....	.....	.....	.....	.....	2.12	-0.40	0.72	0	8	14	11	6	se.	Ozark Utilities Co.
Clinton	Henry	765	44	77.4	- 0.9	100	4	50	9	44	3.19	-0.24	2.32	0	9	.....	.....	.....	.....	U. S. Weather Bureau
Concordia	Lafayette	784	22	.....	.....	.....	.....	.....	.....	.....	3.36	-0.63	1.07	0	8	24	3	4	s.	Miss Ora Stratman
Dean	McDonald	1,000	33	78.1	+ 0.8	102	5	54	26	39	5.44	+1.03	2.20	0	10	16	10	5	sw.	E. S. Taylor
Eldon	Miller	934	42	78.0	+ 0.8	98	31	55	27	37	1.73	-1.49	0.95	0	10	10	12	9	sw.	E. H. Shepherd
Garber	Taney	950	2	77.9	.....	102	5	54	27	39	4.05	.....	1.18	0	8	12	12	7	e.	William H. Durham
Hailey†	Barry	1,350	12	.....	.....	.....	.....	.....	.....	.....	3.29	-0.40	1.18	0	4	12	19	0	w.	A. W. Madison
Harrisonville	Cass	904	59	78.2	+ 0.5	102	4	57	26	35	2.13	-1.48	0.86	0	4	18	9	4	sw.	John H. Patterson
Jefferson City	Cole	557	47	77.4	- 0.7	97	4	56	27	31	1.75	-1.36	0.80	0	5	17	14	0	s.	Mrs. Frank Kliegel
Lamar	Barton	980	49	79.6	+ 1.2	105	5	55	26	38	4.02	-0.20	1.90	0	10	18	10	3	sw.	Jesse A. Mann
Lebanon	Laclede	1,265	49	77.7	+ 0.8	98	4	54	26†	33	2.98	-0.98	1.15	0	9	16	13	2	sw.	Mrs. Rosa E. Montelius
Lexington	Lafayette	688	52	80.2	+ 2.8	100	4	60	26	30	5.72	+1.71	2.98	0	10	22	8	1	se.	Miss Carrie Loomis
Lockwood	Dade	1,078	31	79.0	+ 1.4	101	5	57	26	29	5.52	+0.76	1.26	0	9	21	8	2	sw.	Hubert A. Nieman
Marshall	Saline	779	50	78.4	+ 0.9	95	5†	59	26	28	2.66	-0.91	1.09	0	8	24	7	0	sw.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	36	76.6	+ 0.2	97	4	55	27	32	4.52	+0.63	1.60	0	7	21	8	2	s.	Mo. Fruit Exp. Sta.
Neosho	Newton	1,011	50	79.0	+ 1.5	100	5†	55	26	35	5.14	+0.49	2.05	0	8	18	10	3	sw.	U. S. Fisheries Sta.
Nevada	Vernon	862	44	80.0	+ 0.4	101	4	56	26	33	4.57	+0.91	1.04	0	9	15	15	1	sw	T. J. Kaupp
Sedalia	Pettis	910	17	79.8	+ 2.3	98	4†	60	27	31	2.46	-1.98	0.60	0	9	16	10	5	s.	Mrs. Laura S. Trader
Seligman	Barry	1,542	36	77.4	+ 0.7	96	5	58	26	25	5.09	+0.97	1.62	0	8	20	11	0	w.	Floyd E. Fawver
Seymour (near)	Webster	1,642	31	74.8	- 0.7	92	4	52	26	33	4.72	+0.78	1.55	0	7	23	6	2	sw.	A. L. Hailey
Springfield	Greene	1,301	49	77.8	+ 1.0	95	4	60	26	26	3.95	-0.26	1.95	0	11	13	15	3	s.	U. S. Weather Bureau
Versailles	Morgan	1,037	5	78.1*	- 0.8	97	31	55	26	33	1.33	-3.00	0.79	0	8	12†	15*	3*	sw.	E. M. Wilson
Warrensburg	Johnson	878	50	79.6	+ 0.8	102	4	56	26	35	2.24	-1.73	0.55	0	11	22	5	4	se.	E. A. Markey
Warsaw	Benton	687	36	80.2	+ 1.9	101	4†	57	26†	34	3.99	-0.02	2.40	0	8	15	15	1	se.	Everett Martin
Division means and extremes		.....	.....	78.3	+ 0.7	105	5	50	9	44	3.34	-0.43	2.98	0	8	18	10	3	sw.	
Southeastern Division																				
Arcadia	Iron	926	56	74.8	- 1.0	92	16	49	1	30	4.96	+0.84	1.60	0	10	21	6	4</		



Stations	Drainage-basins	Day of month																															Total		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
Northern Division																																			
Amity	Grand			T.							T.	T.	2.00	1.12	.93	T.	.43			.81														5.86	
Bethany	do								T.	.27		.39	1.24	.37	.94		.10			1.05							.77			T.		.43		5.15	
Bowling Green	Mississippi												.05	.07						.30														0.90	
Brunswick	Grand			.12									.02	.03	.60		.07	.03		.35							1.35	2.48						5.17	
Canton	Mississippi			.07						.04																	1.35	2.60						4.53	
Chillicothe	Grand									.15			2.14	.94	2.31		.20			.26								1.33			.09		.29	6.48	
Clifton Hill	Chariton			.03						.08			.17	.32						.36									.38					5.58	
Columbin	Missouri			.13							T.	T.	.07	.05			T.	T.	1.13	.63						.04	2.04	1.33						2.92	
Conception	do									.05			2.10	1.09	1.27		T.	T.	1.13	.63							2.22	.26						7.50	
Doubling	Mississippi								T.				1.32	.44	.04	T.	.24		T.	2.10			15				.30					.20		4.00	
Edgerton	Missouri			T.						T.	T.	T.	T.	3.17	.02	.95	.83		T.	1.54							1.26	.02			.03			5.83	
Edina	Mississippi												.26	1.44	T.					.70							.13				.03			4.60	
Elsberry	do			T.	T.						T.		.31	.10						2.29							.22	.39						0.86	
Farber	do																			.22								.23						1.09	
Fayette	Missouri			.22						T.	.25									.25	.54						.93	2.60						4.93	
Fulton	do			.08	.24							.02	T.	.04		.07		.21		1.07								.55						2.28	
Gallatin	Grand												1.40	.84	1.57					.93							.18							5.52	
Gorli	Mississippi				T.				.44				.38	1.86	T.		.18			1.15							.18							4.01	
Grant City	Grand											T.	3.09	.88	.46		T.			.07	1.66						.38				T.		.12	.59	7.25
Hannibal	Mississippi			.08								.45	.06	.4	.78	2.45					.44							.60	.16					8.92	
Hermobut	Missouri			.06									.06			.22																		2.59	
Kahoka	Mississippi								T.		T.		.52	1.08						.32								.24						6.34	
Kansas City	Missouri			.11					.10		T.	T.	.15	.63	.04	.03	.34	.60	T.	.99								.28				.08	.12	.35	2.75
Kidder	Grand											T.	.30	1.99	2.66		T.	1.55		1.08								.12			T.			3.11	
King City	Missouri								.02				1.53	1.95	1.89		T.	1.16		2.07								.25			T.		.02	7.85	
Kirkville	Mississippi							.01					.27	.77	.22					.75								.10			T.		.19	7.91	
LaBelle	do							.21					.72	1.82	.81					.80								1.06	.60			.14		3.82	
Lawson	Missouri			.04				.06				.48	2.71	1.11			.51	.36		.57						.07	1.38					.21		4.68	
Linneus	Grand												.22	1.34	.95		.04			.29							.68	.54					7.50		
Louisiana	Mississippi											.05		.50						.29								.60						4.06	
Lucerne	Grand			.27					.04				1.81	.15	.46					.20									.60					1.35	
Macon	Chariton												T.	1.55						.85								.86				.04		4.48	
Madison	Mississippi											.05	.07	.25						.74							1.35	1.37						5.01	
Maryville	Missouri			T.							T.	T.	3.69	1.50	.40	.06	.20			2.59								.25	1.52					4.64	
Memphis	Mississippi			.07					.05			T.	.54	2.10	.30			T.		1.15								.51			T.		.27	7.78	
Mexico	do			.05									.02	.13						.82								.74	.23			.09		4.94	
Milant	Grand											T.	.63	.80	.82				2.05									.08	.70	.10				3.13	
Moberly	Mississippi			.05								.18		.13	.23		.11			.61								.79						3.65	
Mouree City	do										.15			.19	3.92				.50								1.10	.71					3.01		
New London	do													.23	.36				1.53								.37	.21					6.37		
Oregon	Missouri			T.									3.19	2.28	.13	.48	.20			.55								.57						3.84	
Palmyra	Mississippi												.74		5.77	.80				.52								.06				.34	T.	7.20	
Paris	do												.25	.51						1.21								.89						8.46	
Perry	do													.25	.51					1.43								.95						3.87	
Philadelphia	do													.33	4.05	1.33				2.10								.70						2.63	
St. Charles	Missouri			.08								.01		.01		.02	.40	.86		1.26	.34							.07	.43					8.51	
St. Joseph	do			T.						T.	T.	T.	1.69	1.64	.05	.40													.07				.04	0.93	
Shelbina	Mississippi								.01				.25	.31	.10	.05				1.48								T	.54			1.91	.01	T.	7.89
Shelbyville	do											.25		.31	.10	.05				1.05									.94					3.72	
Steffeville	do								.10		.05	T.	.46	2.24	.38					1.05								1.00	.10					5.69	
Tarkio	Missouri												4.82	1.30	.38		.25			.90								.75						6.40	
Trenton	Grand			T.					.01			T.	.74	1.34	.30	.61	.15		.15	.68								1.32				1.96	T.	10.36	
Troy	Mississippi			.04									.35	.01	.11					.29														5.30	
Unionville	Chariton										T.		.83	T.	.50			T.		.86												.03		0.73	
Warrenton	Mississippi			.12	.04						T.	1.44		.06			.05												.35					2.54	
Waukegan, Ia.	do			.04	.09				2.03	T.			.15	1.20	.01		.01		.08										.28			.07	.27	2.76	
Southwestern Division																																			
Altona	Osage												1.12				.22	.10		.68														2.12	
Appleton City	do			T.					T.	.03	.05		.69				.13	.14	.02		1.14							T.	.38					2.20	
Boonville	Missouri			.08									.27				.03	.24	.08		.53							.73	.38					2.53	
Buffalo	Osage			.07							1.00		.23			.17		.20		.20		.39												3.95	
Caplinger Mills	do			.50							.03	.06	.60				T.	.10	.03		.08	.72												2.12	
Clinton	do			.32								.17	.15	.04		.08	.02	.03	.06		2.32													3.19	
Concordia	Missouri			.02					T.			T.	.61	1.07	.21		.13			.65								.09	.55					3.36	
Denn	Neosho			T.			.12	T.	.26	.08	.42	.04	.08	.25	.10	.05	.02	.06	.01		.95								.15					5.44	
Elton	Missouri												.04	.09						.12	1.69								.92					1.73	
Galena	White			.12		.03						.04	.09				.06	.01			.95							.01				.20		3.01	
Garber	do			.49		.09				.08	1.16	.02								.45	.63								.92					3.01	
Halley	do										.96																								

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## Daily Precipitation for July 1937—Continued from preceding page

Stations	Drainage-basins	Day of month																															Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>Southeastern Div.—Continued</i>																																		
Caruthersville	Mississippi			3.30	.25				.60			.03		.39				2.10		.70	.07							.09						7.53
Centerville	Black			.21	.05				.02		T.	.25					.34	1.23	.01	.75	T.	T.		T.									2.86	
Crystal City	Mississippi						.14						.37					1.97		.81							.08						3.37	
Cuba	Meramec											.40								T.	1.35												1.75	
Dexter	St. Francis			4.55								.14						1.47	T.	1.59								.02					7.77	
Doniphan	Black		.07	.50	.49						.19	.40						1.02	.28	1.38								.12		T.			4.45	
Farmington	St. Francis			1.94	.01				T.			.16				.45	1.20	.01	1.02	.30							.10						6.27	
Fisk	do			T.							T.						.19		.32								.06						10.00	
Fredericktown	do				.90												1.91	.40	.68	.26													4.15	
Goodland	Black			1.00	.11				.13			.26				.03		.12	1.00								.08						2.73	
Greenville	St. Francis			1.44	.11						.21						.69	.08	1.14														3.56	
Jackson	Mississippi			.02					.09				.28				.52	1.02		.50							.14						2.57	
Koshkonnong	Black										.72	.38							.80	1.59													3.49	
Leeper	do			1.05	1.70							.37						.15		1.72													4.99	
Licking (near)	Gasconade										.21	.24				.06	.04		1.34	.16					.28								2.33	
Marble Hill	Mississippi								.05		.10	1.10	1.35				1.25	.75	.20	.45													4.25	
Meramec Park	Meramec				.02					.04		.22	.20					.15		2.11							.11						2.85	
Morehouse	Mississippi			.65														.70	.04	.47													1.86	
New Madrid	do			1.02	.23									.01				.98	T.	.17	.22												2.63	
Owensville	Gasconade										.06		.02	.14	T.			.77		2.32	T.						.30						3.61	
Parma	St. Francis			2.75													1.55	.55															4.85	
Poplar Bluff	Black			5.52	.04							.20						.62	.06	.83													7.62	
Richwoods	Meramec			T.	.50			T.												1.40						2.25	.35						4.15	
Rolla	do			T.	.08				.04	.02	.64		.01				.09		4.07								.23						5.18	
St. Louis***	Mississippi			.03	T.				.01	T.	.04	.01	T.				.02	T.		.36					.12						.03	.05	0.67	
St. Louis University*	do			.04	T.				.02	T.	.05	.02	T.				.05		.37					.12					T.	T.	.04	0.71		
Salem	Meramec								.03	T.	.30	.11				.12		.21	1.18							.02	.13						2.10	
Slakeston	Mississippi			.64														.48	.02	.48	.01											1.63		
Union	Meramec			T.							.21		.10				.09	.07		.86								.90				T.	2.23	
Valley Park	do			.03	.57						T.	.02	.67		T.			.70		.46	.06						.33					2.84		
Van Buren	Black			1.02	T.						.32						.10		1.73														3.17	
West Plains	do			.15		.01					1.57	.28							1.11	.91							.06						5.09	
Williamsville	do			3.60	.56							.32	.02				.29		1.06														5.85	
Willow Sprgs. (near)	White			.11						T.		.38	.16				.04	.08	.09	1.82	.03					.08							2.79	
Zalma	Mississippi			.22														.40	.41	.50												1.53		
Cairo, Ill.***	do			T.	.32				T.		.03	T.					.66	.03	.02	.47													1.53	

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. || Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. T. Trace, or less than 0.01 inch.  
 \*\*\* Regular U.S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. \*\* Precipitation in the next following measurement: separate dates of fall not recorded. \* Precipitation is for 24-hour period, midnight to midnight † Estimated. ‡ Partially estimated. |||| Incomplete. †† 10.33 inches.

## Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for July 1937

(See precipitation data in table on preceding page)

Station	Data	Day of month																														Monthly	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		31
Lakeside ..... (Osage Dam)	{ Evaporation .....	.283	.281	.247	.105	.182	.355	.293	.345	.231	.289	.182	.145	.286	.337	.343	.279	.302	.237	....	.194	.292	.261	.288	.300	.225	.301	.299	.261	.284	.273	.316	8.283
	{ Mean temperature ..	74	76	74	81	80	79	80	80	80	81	76	80	83	84	86	80	79	77	77	74	76	76	78	80	78	71	70	78	78	81	82	78.4
	{ Wind movement ..	44	37	50	36	46	33	36	42	47	49	46	51	59	72	75	77	67	44	59	38	30	38	36	43	59	71	43	38	33	31	36	1,466

Observations taken at 7.30 a.m. Wind movement corrected to true velocities. For description see April 1932 report.

\*\*\*\* Evaporation included in next measurement.

Continued from page 31

Windstorms.—On the 4th, some damage to buildings and trees in Washington and Iron counties; 12th, trees damaged at Lexington and corn at Oregon; 18th, 3 persons slightly injured and buildings, trees, and crops damaged at Harg, Boone County; 19th, buildings, trees, and crops damaged in Texas and Laclede counties; 23d, some damage to trees, crops, and wires, at Brookfield, College Mound, Darksville, Glasgow, Kirksville, and Macon; 24th, at Clifton Hill damage to barns, roofs, and

trees, estimated at \$10,000, besides considerable crop damage, also some damage in Howard County; 30th, at Warrenton, outbuildings and trees damaged.

## NEW STATION, UNION, FRANKLIN COUNTY

A large area to the southwestward of St. Louis was not represented in temperature records and miscellaneous weather records, although a river-rainfall station was in operation. Fortunately, Mr. Robert Mueller, of Union, Franklin County, who has been river and rainfall observer for a number of years, consented to serve also as cooperative climatological observer, and was furnished the necessary equipment on June 29, 1937.



## Daily Temperatures for July 1937

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Northern Division																																	
Brunswick §§	Maximum...	88	91	86	97	98	95	96	95	96	97	89	93	95	94	96	92	86	90	89	88	91	94	97	80	81	82	85	91	92	95	95	91.4
	Minimum...	58	60	63	67	67	68	69	70	71	71	70	71	70	74	71	69	66	65	65	64	65	67	65	66	61	59	59	64	70	72	66.7	
Chillicothe §§	Maximum...	86	91	91	98	98	96	97	95	96	98	91	91	94	94	95	90	83	89	88	86	91	91	96	77	79	85	85	91	91	96	95	91.2
	Minimum...	60	68	63	68	64	67	69	67	69	71	68	71	67	68	74	68	64	65	63	65	64	66	66	65	67	67	66	58	63	67	70	66.2
Columbia	Maximum...	85	88	81	95	93	92	93	92	93	96	87	91	95	95	93	84	88	84	85	88	89	92	89	81	82	84	91	92	93	96	89.8	
	Minimum...	65	62	66	70	67	69	71	73	71	71	69	75	71	75	75	71	68	66	67	65	64	68	69	69	62	59	56	65	67	72	68.1	
Fayette	Maximum...	84	88	84	94	92	94	93	93	94	94	90	91	96	95	95	91	84	90	84	87	89	92	95	87	82	82	85	90	92	93	96	90.2
	Minimum...	59	60	59	65	63	63	65	66	67	68	68	73	69	70	71	65	64	64	67	61	60	62	62	63	64	56	53	59	64	69	68	64.2
Grant City	Maximum...	83	91	94	95	95	97	97	95	94	95	86	90	90	91	93	90	83	86	81	85	87	89	93	85	75	82	83	91	89	91	90	89.2
	Minimum...	59	52	64	71	67	67	70	67	69	70	69	67	68	68	69	69	60	63	59	65	65	68	68	68	67	55	60	61	66	66	70	65.4
Hannibal	Maximum...	82	87	88	91	92	92	93	93	93	94	89	85	89	92	92	91	89	85	83	85	86	89	91	88	81	77	82	88	90	87	90	88.2
	Minimum...	55	59	65	67	66	68	67	70	71	73	70	72	66	66	75	70	66	63	66	63	64	65	67	66	66	58	58	61	68	68	69	66.1
Kansas City	Maximum...	88	92	93	103	98	100	98	95	95	93	83	95	98	96	99	92	85	91	86	87	90	93	98	78	82	86	90	93	95	101	92.5	
	Minimum...	69	62	71	74	72	76	73	73	75	74	72	72	71	74	65	67	71	65	65	70	68	73	74	72	65	61	69	68	69	72	75	70.3
Kirksville	Maximum...	85	90	89	95	96	96	96	95	97	97	87	92	92	93	92	80	88	86	88	90	91	96	92	80	82	83	91	89	95	88	90.6	
	Minimum...	54	59	63	65	65	67	65	68	73	69	71	67	69	75	72	62	60	65	61	63	61	66	64	63	57	57	63	65	66	68	65.2	
Lawson	Maximum...	87	92	89	98	97	97	97	95	93	93	84	91	94	92	94	89	83	88	85	85	88	90	94	79	80	82	85	92	92	95	90.1	
	Minimum...	62	58	68	72	69	68	70	68	67	72	68	70	67	69	64	67	66	62	62	66	65	68	68	67	66	56	61	64	68	67	73	66.4
Louisiana	Maximum...	80	86	86	95	90	90	85	93	94	94	88	90	89	97	95	95	90	85	83	87	88	90	96	95	83	80	83	90	83	85	90	89.2
	Minimum...	50	64	62	66	68	62	60	62	67	70	70	71	70	71	75	68	68	66	54	54	56	66	66	64	60	48	54	60	65	67	63.3	
Macon§§	Maximum...	86	92	90	96	95	95	95	96	95	100	93	91	96	95	96	94	84	89	83	88	91	93	98	88	81	81	86	93	93	96	90	91.6
	Minimum...	57	56	63	65	66	65	66	68	72	69	73	68	72	69	73	68	67	73	70	64	61	62	60	63	63	60	57	61	68	68	67	64.9
Maryville	Maximum...	86	93	95	97	95	97	97	93	95	97	87	91	86	92	94	89	85	87	83	85	88	89	94	86	76	83	85	91	88	89	90	89.8
	Minimum...	61	58	66	68	68	70	71	70	69	70	69	66	67	68	70	65	62	65	60	66	65	66	68	68	56	60	62	63	64	71	66.0	
Mexico §§	Maximum...	85	88	91	100	95	95	97	98	98	98	91	93	99	96	95	93	95	85	86	90	93	95	91	86	81	85	92	95	95	93	92.7	
	Minimum...	59	59	62	67	62	69	66	68	70	70	69	72	69	74	73	70	68	66	68	59	62	65	66	68	67	57	57	59	64	68	69	65.9
Moberly	Maximum...	85	89	84	95	95	97	98	97	97	90	84	86	91	90	91	90	86	87	83	87	94	90	93	89	79	80	82	90	92	93	92	89.5
	Minimum...	58	57	61	67	62	63	66	64	69	69	68	72	68	68	70	69	66	62	68	58	59	64	66	63	66	58	52	58	64	69	67	64.2
Oregon	Maximum...	89	94	97	101	100	101	100	96	99	97	83	93	94	95	98	92	89	91	87	88	92	93	96	84	78	86	87	94	93	92	97	92.8
	Minimum...	62	59	68	74	68	72	73	69	70	71	69	68	66	69	67	65	64	65	61	65	67	70	73	69	67	58	64	65	68	65	73	67.2
St. Charles §§	Maximum...	85	91	86	95	95	95	96	94	95	92	93	97	97	96	95	84	90	85	80	91	90	95	96	88	84	88	94	94	94	91	91.6	
	Minimum...	53	60	64	67	65	67	63	70	72	73	73	73	77	79	75	71	64	64	60	60	63	65	70	70	60	54	59	66	69	71	66.8	
St. Joseph	Maximum...	83	93	95	100	98	99	98	94	96	94	82	94	97	95	97	91	84	90	86	86	90	92	98	80	78	85	86	93	93	92	98	91.7
	Minimum...	65	62	71	73	71	74	75	72	76	71	69	68	71	73	67	67	63	63	67	70	71	74	71	66	60	60	66	69	67	67	75	69.3
Trenton	Maximum...	86	91	94	95	96	96	97	95	98	98	91	92	93	93	90	81	91	89	88	90	92	95	90	82	83	87	93	92	94	92	91.3	
	Minimum...	61	54	58	70	61	66	68	69	68	70	69	66	68	69	73	68	63	64	63	64	63	65	66	66	58	57	63	68	68	69	65.3	
Unionville §§	Maximum...	86	89	92	95	95	97	96	95	95	93	89	91	91	92	92	92	79	88	85	86	89	91	90	89	75	83	84	92	94	93	90.0	
	Minimum...	58	59	64	67	65	67	67	70	73	70	73	69	69	68	70	71	59	60	63	64	63	66	67	67	62	56	58	63	66	67	69	65.4
Warrenton	Maximum...	79	85	84	92	92	90	91	90	93	86	87	91	89	88	93	78	85	82	81	86	88	90	86	80	86	83	88	92	90	92	87.4	
	Minimum...	55	60	65	66	68	69	70	71	70	71	74	74	75	75	74	70	63	64	59	61	64	65	68	67	58	58	63	68	68	67	66.5	
Southwestern Division																																	
Appleton City	Maximum...	92	92	89	99	95	95	95	91	94	92	82	91	93	92	93	94	86	84	86	85	89	90	93	87	88	85	88	93	93	98	90.9	
	Minimum...	57	62	70	66	70	67	66	65	66	66	66	70	71	67	66	68	67	65	64	61	63	64	66	68	54	55	66					







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# CLIMATOLOGICAL DATA

19 **MISSOURI SECTION**  
**ROScoe NUNN**  
**ST. LOUIS, MO.**  

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Vol. XLI **AUGUST 1937** No. 8  

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## GENERAL SUMMARY

The month was unusually warm and dry. Although far from being as warm as August of last year, which was the hottest August of record, this August was the fifth warmest in the last 50 years; in fact, only the Augusts of 1936, 1918, and 1913, appreciably exceeded the present month in warmth. Yet, there were but few extremely warm days, except at some stations near the western border. Persistence of fairly strong daily excesses of temperature was a notable characteristic of the month. Temperatures relatively were higher in the north and west than in the east and south.

Rainfall was deficient over much the greater portion of the State, with the larger deficiencies in the southern half, and all three divisions showing averages much below normal; yet a few localities in each division received more than normal amounts. Large areas in the southern half of the State and considerable areas in west-central and east-central sections, received less than 1 inch during the month. In most of the northern third of the State moisture conditions continued satisfactory.

At the end of the month early planted corn was mostly in good to excellent condition, except in the very dry areas, but late corn was suffering from heat and lack of moisture in most parts of the State, with some firing and some being forced too quickly to maturity. Filling of silos had begun. Alfalfa third cuttings were short and pastures were mostly poor except in some northern portions. Gardens were failing in the drier areas, but were still good in many places. Apples, peaches, grapes, and melons were generally promising good crops.

## TEMPERATURE

The monthly mean temperature for the State, 75 stations reporting, was 80.5°, or 4.1° above normal. The highest monthly mean was 83.8° at Kansas City, and the lowest monthly mean was 77.6° at Seymour (near). The highest temperature recorded was 105° at Marble Hill on the 9th and Garber on the 10th, and the lowest was 51° at Goodland on the 6th and Greenville on the 14th. The greatest daily range was 42° at Goodland, Greenville, and Marble Hill on the 14th.

## PRECIPITATION

The average precipitation for the State, 134 stations reporting, was 2.05 inches, or 1.75 inches less than normal. The greatest local monthly amount was 6.10 inches at Clifton Hill, and the least local monthly amount was 0.34 inch at Fisk. The greatest amount in any twenty-four hours was 3.99 inches at Lawson on the 19-20th. The average number of days with 0.01 inch or more of precipitation was 5.

## MISCELLANEOUS PHENOMENA

Fog.—Dense, 5th, 7th, 17th, 18th, 22d, 24th, 25th, 27th.  
Hail.—Light, 5th at St. Louis, 6th at Trenton, 7th at Richwoods; moderate, 5th in St. Louis County; heavy, 6th at Koshkonong, with crop loss estimated at \$25,000 and heavy loss to roots.  
Halos.—Solar, 1st, 7th; lunar, 17th.  
Thunderstorms.—Local, 1st, 2d, 5th, 7th, 8th, 9th, 15th, 16th, 18th, 21st, 22d, 26th, 27th, 29th, 30th, 31st; more or less general, 3d, 4th, 6th, 10th, 11th, 17th, 19th, 20th.

Windstorms.—On the 4th, with some damage at Fayette. On 6th, some damage to trees and buildings at Koshkonong and to trees at Salem. On 10th, some damage to boats at Lakeside (Bagnell Dam). On 11th, some timber blown down in western part of Ripley County.

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind				Relative humidity			Percentage of sunshine
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12 noon	6:30 p. m.	
Columbia.....	29.98	30.15	25	29.78	8	6.7	28	n.	3	81	54	52	75
Kansas City.....	29.95	30.15	21	29.71	18	8.0	33	n.w.	3	78	47	48	80
St. Joseph.....	29.95	30.18	21	29.69	18	7.4	23	w.	10	79	51	50	77
St. Louis.....	30.00	30.19	15	29.78	9	9.2	30	sw.	17	75	49	50	68
Springfield.....	29.99	30.17	16	29.81	8	8.0	26	e.	4	81	54	54	74
Cairo, Ill.....	29.99	30.20	16	29.79	9	6.1	18	n.w.	17	86	55	59	77
Keokuk, Iowa..	30.00	30.17	25	29.78	18	5.8	26	se.	18	80	54	61	78

## COMPARATIVE DATA FOR AUGUST

Year	Temperature			Precipitation						Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, State	Average for State	Precip. 0.1 in. or more	Clear	Partly cloudy	Cloudy
1888.....	74.0	110	45	7.03	5.95	7.84	7.30	0	11	11	..	..	..
1889.....	73.5	101	52	1.69	1.65	2.11	1.31	0	14	..	..	..	..
1890.....	73.3	106	47	5.13	4.25	7.21	3.93	0	9	..	..	..	..
1891.....	73.2	102	38	5.29	5.96	5.14	4.78	0	8	..	..	..	..
1892.....	74.3	102	44	2.65	2.24	2.63	3.08	0	6	17	..	..	..
1893.....	72.8	100	40	1.99	2.55	1.89	1.53	0	4	18	10	3	3
1894.....	77.0	111	39	1.64	1.00	1.59	2.33	0	5	14	16	1	1
1895.....	75.3	104	46	4.02	5.45	3.51	3.09	0	8	15	11	5	5
1896.....	76.6	108	41	3.13	3.32	3.25	2.82	0	6	17	10	4	4
1897.....	74.1	108	41	2.37	2.48	2.23	2.39	0	6	19	9	3	3
1898.....	75.8	103	44	3.13	2.93	2.88	3.57	0	5	17	10	3	3
1899.....	78.8	107	49	3.13	4.19	2.76	2.45	0	7	18	10	3	3
1900.....	80.3	105	52	3.55	2.99	4.79	2.87	0	6	19	9	3	3
1901.....	78.4	109	47	2.05	1.12	2.74	2.29	0	5	19	9	3	3
1902.....	75.0	103	47	6.06	5.66	6.79	5.74	0	10	14	11	..	..
1903.....	74.5	102	43	5.00	6.51	5.01	3.44	0	10	16	11	..	..
1904.....	73.7	100	43	5.40	5.61	5.84	4.76	0	8	16	10	..	..
1905.....	76.4	99	48	4.68	4.19	5.90	3.94	0	8	19	7	..	..
1906.....	76.6	101	40	4.70	3.99	5.10	5.01	0	11	14	10	..	..
1907.....	77.3	109	47	3.89	3.92	3.90	3.85	0	9	17	8	..	..
1908.....	76.4	102	46	3.46	3.63	3.61	3.14	0	8	17	9	..	..
1909.....	79.5	110	40	0.60	0.31	0.67	0.81	0	2	24	6	6	6
1910.....	74.7	103	40	2.92	2.63	3.56	2.57	0	6	15	9	7	7
1911.....	75.4	109	41	4.33	2.81	4.97	5.21	0	7	15	8	8	8
1912.....	76.2	104	41	4.04	4.77	3.42	3.93	0	9	17	7	8	8
1913.....	82.8	110	41	1.09	1.24	0.67	1.37	0	3	22	7	7	7
1914.....	78.0	106	49	4.25	3.73	4.53	4.48	0	9	15	9	..	..
1915.....	69.8	98	37	8.19	4.99	7.57	12.02	0	12	12	9	10	10
1916.....	79.2	107	41	4.09	5.39	2.55	4.33	0	7	19	7	7	7
1917.....	73.3	104	38	4.69	3.13	5.04	5.89	0	8	16	8	..	..
1918.....	81.8	111	45	3.67	3.22	2.91	4.59	0	8	17	9	..	..
1919.....	75.7	106	44	4.33	4.41	4.47	4.12	0	8	17	9	..	..
1920.....	73.1	102	43	4.69	3.56	5.94	4.56	0	9	15	8	..	..
1921.....	76.8	109	48	5.39	5.16	6.42	4.60	0	9	14	10	7	7
1922.....	77.5	107	46	2.44	2.68	1.67	2.97	0	6	18	8	..	..
1923.....	77.3	108	42	3.81	5.47	1.87	4.08	0	8	16	9	6	6
1924.....	77.2	106	48	4.11	3.66	4.50	4.18	0	7	19	8	4	4
1925.....	76.5	107	45	3.34	5.31	2.60	2.10	0	6	19	8	..	..
1926.....	77.5	106	50	5.65	4.03	6.39	6.53	0	10	15	9	7	7
1927.....	71.1	97	39	5.09	4.19	7.04	4.04	0	9	14	10	7	7
1928.....	76.4	99	45	5.48	4.37	6.75	5.33	0	9	15	10	6	6
1929.....	76.0	105	43	2.58	1.84	2.21	3.69	0	6	18	9	4	4
1930.....	78.5	114	47	1.99	2.39	1.87	1.70	0	6	16	10	5	5
1931.....	74.9	106	44	4.97	4.03	5.66	5.21	0	9	15	9	7	7
1932.....	77.2	106	46	5.70	7.82	3.86	5.42	0	9	18	9	4	4
1933.....	75.4	103	48	3.82	4.32	3.80	3.33	0	9	13	10	8	8
1934.....	80.6	115	41	4.01	3.36	2.83	5.83	0	9	14	11	6	6
1935.....	77.7	110	45	2.20	1.60	2.73	2.26	0	6	17	9	5	5
1936.....	84.6	116	43	0.84	0.90	0.91	0.72	0	4	20	8	3	3
1937.....	80.5	105	51	2.05	2.50	2.00	1.64	0	5	17	11	3	3
Period.....	76.4	116	37	3.80	3.67	3.92	3.82	0	8	17	9	5	5



## Climatological Data for August 1937

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches			Number of days				Prevailing direction of wind	Observers		
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelted	With precipitation, .01 inch or more	Clear			Partly cloudy	Cloudy
Northern Division																				
Bethany	Harrison	916	42	79.7	+ 4.7	100	16	60	13†	36	2.14	-1.68	1.07	0	4	26	3	2	se.	A. S. Cumming
Brunswick	Chariton	652	56	81.0	+ 6.8	101	3	64	13	31	3.32	-0.62	1.44	0	5	19	4	8	se.	O. K. Benecke
Chillicothe	Livingston	779	28	80.3	+ 4.8	102	3	62	12	31	4.65	+0.69	1.47	0	6	19	9	3	sw.	Wm. J. Olenhouse
Clifton Hill	Randolph	731	38	79.7	+ 3.7	98	17	62	13	29	6.10	+2.30	2.58	0	10	21	5	5	s.	Dr. A. J. Bradsher
Columbia	Boone	740	47	81.2	+ 5.6	98	17	62	13	27	1.98	-1.62	1.23	0	7	13	12	6	se.	U. S. Weather Bureau
Conception	Nodaway	980	48	80.3	+ 5.6	102	16	60	12	35	2.17	-1.47	1.37	0	3	17	13	1	se.	Fr. Adelhelm Hies
Downing	Schuyler	876	16	79.6 <sup>c</sup>	+ 4.7	102	16	59	13	34	0.45	-3.19	0.21	0	4	15 <sup>c</sup>	10 <sup>c</sup>	1 <sup>c</sup>	se.	Everett Rowe
Edgerton	Platte	856	17	81.4 <sup>a</sup>	+ 6.3	103	3	60	12	35	4.34	+0.30	2.26	0	7	25	2	4	s.	Fred L. Stiff
Elsberry	Lincoln	449	6	78.2	.....	99	16	56	13	36	2.11	.....	0.78	0	7	11	18	2	s.	Ray E. Mills
Fayette	Howard	680	57	79.6	+ 3.7	98	3†	58	13	34	2.80	-0.76	2.17	0	5	14	13	4	s.	Harry P. Mason
Fulton	Callaway	818	49	80.8	+ 4.4	99	16†	57	13	35	1.49	-2.16	1.09	0	4	17	12	2	se.	Clyde C. Herring
Gorin	Scotland	700	50	.....	.....	.....	.....	.....	.....	.....	2.36	-1.10	1.55	0	4	23	7	1	se.	W. L. Harker
Grant City	Worth	1,134	33	79.6	+ 4.7	100	16†	59	12	36	1.23	-2.71	1.04	0	3	13	15	3	se.	Howard Rybolt
Hannibal	Marion	759	45	79.2	+ 4.2	99	16	60	13	30	1.45	-1.89	0.91	0	4	7	14	10	se.	Hannibal Water Dept.
Kansas City	Jackson	741	48	83.8	+ 7.2	104	3	66	22	27	2.26	-1.83	1.44	0	5	13	14	4	s.	U. S. Weather Bureau
Kidder	Caldwell	1,020	45	79.2	+ 3.8	98	16	60	12	28	2.02	-1.94	1.39	0	4	19	10	2	se.	Roscoe L. Terry
King City	Gentry	1,095	11	.....	.....	.....	.....	.....	.....	.....	2.03	-1.65	1.00	0	5	3	26	2	se.	John M. Martin
Kirkville	Adair	969	48	79.4	+ 5.4	98	16	61	13	31	5.04	+0.92	3.50	0	7	19	7	5	sw.	Charles Noble
Lawson	Ray	1,050	0	80.6	.....	101	3	62	12	30	4.37	.....	3.99	0	5	18	7	6	sw.	Elmer E. Lamb
Linneus	Linn	816	5	.....	.....	.....	.....	.....	.....	.....	2.70	.....	1.36	0	6	25	4	2	se.	H. D. Taggart
Louisiana	Pike	469	43	78.8	+ 3.9	100	16†	52	13	38	1.69	-2.85	0.92	0	6	13	17	1	w.	Stark Bros Nurseries
Macon	Macon	875	38	78.9	+ 2.8	99	3†	59	13	32	4.95	+1.14	2.95	0	7	20	8	3	ne.	W. C. Brown
Maryville	Nodaway	1,169	47	79.8	+ 6.0	100	16	60	21	32	1.61	-2.37	1.39	0	4	21	6	4	se.	R. B. Montgomery
Mexico	Audrain	800	48	80.9	+ 4.9	100	3†	57	13	34	3.42	-0.43	2.10	0	5	25	1	5	e.	Mrs. Abbie Snoddy
Moberly	Randolph	875	0	78.3	.....	97	17†	56	13	36	2.43	.....	1.70	0	4	21	9	1	sw.	McCormick Hospital
Monroe City	Monroe	748	16	.....	.....	.....	.....	.....	.....	.....	1.83	-2.49	0.61	0	8	15	8	8	ne.	J. S. Conway
Oregon	Holt	1,048	81	81.6	+ 6.4	103	15	60	21	32	2.27	-1.53	1.85	0	3	23	6	2	se.	Miss Mina Wright
St. Charles	St. Charles	520	49	82.0	+ 5.2	104	16	62	6	34	2.06	-2.18	1.41	0	6	20 <sup>a</sup>	6 <sup>a</sup>	4 <sup>a</sup>	se.	Martin L. Comann
St. Joseph	Buchanan	957	27	82.5	+ 6.0	102	15	64	22	28	3.24	-0.59	2.51	0	6	23	6	2	se.	U. S. Weather Bureau
Shelbina	Shelby	779	44	.....	.....	.....	.....	.....	.....	.....	1.95	-1.77	0.91	0	5	.....	.....	.....	.....	J. C. Jewett
Steffenville	Lewis	650	39	78.6	+ 2.1	99	16	61	29	33	5.43	+1.39	2.45	0	7	16	14	1	s.	Frank Hall
Tarkio	Atchison	916	34	79.4	+ 4.2	100	15	57	12	32	2.62	-1.28	1.96	0	4	17	12	2	se.	Albert Volker
Trenton	Grundy	822	41	80.1	+ 4.9	101	16	61	12†	33	3.19	-0.69	1.04	0	6	21	8	2	s.	W. H. Estes
Unionville	Putnam	1,062	44	80.2	+ 5.4	101	16	60	12†	31	0.95	-3.33	0.38	0	4	20	5	6	s.	John H. Schick
Warrenton	Warren	816	55	80.0	+ 3.5	97	16	61	13	30	0.94	-2.73	0.40	0	7	10	19	2	sw.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.	574	66	78.8	+ 3.8	98	16	64	22	27	3.88	+0.68	2.24	0	6	13	8	10	se.	U. S. Weather Bureau
<b>Division means and extremes</b>	<b>and extremes</b>	.....	.....	<b>80.1</b>	<b>+ 4.8</b>	<b>104</b>	<b>3†</b>	<b>52</b>	<b>13</b>	<b>38</b>	<b>2.50</b>	<b>-1.17</b>	<b>3.99</b>	<b>0</b>	<b>5</b>	<b>17</b>	<b>10</b>	<b>4</b>	<b>se.</b>	
Southwestern Division																				
Appleton City	St. Clair	853	42	80.5	+ 2.7	99	3†	56	13	33	3.95	-0.01	3.06	0	4	23	4	4	sw.	Rolla Brown
Buffalo	Dallas	1,200	7	.....	.....	.....	.....	.....	.....	.....	0.94	.....	0.48	0	6	23	7	1	.....	C. M. McCallister
Caplinger Mills	Cedar	750	11	.....	.....	.....	.....	.....	.....	.....	2.94	-1.61	1.77	0	5	21	6	4	se.	Ozark Utilities Co.
Clinton	Henry	765	44	81.0	+ 3.4	99	3†	60	13	36	1.99	-1.66	0.55	0	7	.....	.....	.....	.....	U. S. Weather Bureau
Concordia	Lafayette	784	22	.....	.....	.....	.....	.....	.....	.....	1.25	-2.60	0.67	0	4	26	3	2	sw.	Miss Ora Stratman
Dean H.	McDonald	1,000	33	80.4	+ 2.7	102	10	54	13	39	1.95	-2.17	1.67	0	5	16	12	3	s.	E. S. Taylor
Eldon	Miller	934	42	79.9	+ 3.5	100	3†	56	14	37	4.58	+0.92	2.86	0	5	7	13	11	e.	E. H. Shepherd
Garber	Taney	950	2	80.4	.....	105	10	53	13	41	1.05	.....	0.75	0	7	8	13	10	e.	William H. Durham
Hailey†	Barry	1,350	12	.....	.....	.....	.....	.....	.....	.....	2.50	-2.44	0.82	0	6	12	19	0	w.	A. W. Madison
Harrisonville	Cass	904	59	80.3	+ 4.4	99	3	63	13†	29	0.95	-3.23	0.42	0	5	14	13	4	se.	John H. Patterson
Jefferson City	Cole	557	47	79.6	+ 2.9	98	16†	56	13	31	2.46	-1.37	0.65	0	9	20	9	2	s.	Mrs. Frank Kliegel
Lamar	Barton	980	49	82.5	+ 4.8	102	9†	59	13	37	1.74	-2.55	1.62	0	2	22	8	1	sw.	Jesse A. Mann
Lebanon	Laclede	1,265	49	80.4	+ 4.3	101	10	56	13	36	2.43	-2.06	1.32	0	7	13	18	0	sw.	Mrs. Rosa E. Montelius
Lexington	Lafayette	688	52	82.4	+ 6.2	102	3	63	13	31	0.75	-2.77	0.30	0	6	20	10	1	ne.	Miss Carrie Loomis
Lockwood	Dade	1,078	31	81.3	+ 4.1	102	10	60	13	32	3.32	-1.38	1.95	0	6	15	16	0	se.	Hubert A. Nieman
Marshall	Saline	779	50	80.8	+ 4.8	100	3	63	13	27	3.78	-0.12	2.10	0	7	24	4	3	se.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	36	80.4	+ 4.9	103	9	56	13	36	0.98	-3.36	0.32	0	8	20	9	2	sw.	Mo. Fruit Exp. Sta.
Neosho	Newton	1,011	50	80.2	+ 3.1	101	10	59	13	35	1.14	-3.23	0.97	0	3	23	8	0	sw.	U. S. Fisheries Sta.
Nevada	Vernon	862	44	82.4	+ 5.3	102	15	57	13	34	1.45	-2.32	0.60	0	5	14	13	4	sw.	T. J. Kaupp
Sedalia	Pettis	910	17	82.2	+ 5.7	100	3†	60	13	30	1.13	-4.05	0.50	0	9	21	8	2	s.	Mrs. Laura S. Trader
Seligman	Barry	1,542	36	78.2 <sup>b</sup>	+ 2.0	96	10	59	13	29	2.91	-1.09	1.35	0	6	15 <sup>b</sup>	11 <sup>b</sup>	3 <sup>b</sup>	w.	Floyd E. Fawver
Seymour(near)	Webster	1,642	31	77.6	+ 2.6	97	10	54	13	34	0.64	-3.60	0.46	0	5	15	13	3	sw.	A. L. Hailey
Springfield	Greene	1,301	49	80.3	+ 4.6	98	10	63	13	25	1.88	-2.21	0.94	0	7	11	17	3	se.	U. S. Weather Bureau
Versailles	Morgan	1,037	11	81.2	+ 2.7	99	3†	56	13	32	1.66	-2.41	0.55	0	7	18	10	3	s.	I. M. Wilson
Warrensburg	Johnson	878	50	82.7	+ 5.6	100	3†	59	13	32	1.76	-2.21	0.91	0	6	19	8	4	sw.	E. A. Markey
Warsaw	Benton	687	36	82.1	+ 4.5	101	1	58	13	33	5.10	+0.48	2.00	0	7	16	11	4	se.	Everett Martin
<b>Division means and extremes</b>	<b>and extremes</b>	.....	.....	<b>80.8</b>	<b>+ 4.0</b>	<b>105</b>	<b>10</b>	<b>53</b> </												



Daily Precipitation for August 1937

[illegible]

Continued on next page



## Daily Precipitation for August 1937—Continued from preceding page

Stations	Drainage-basins	Day of month																															Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Southeastern Div.—Continued																																		
Caruthersville	Mississippi													.87								.19	.05	.36	1.60	.04						.06	3.17	
Centerville	Black							.02				.15								.01			.23			.04		.02				.08	0.55	
Crystal City	Mississippi				.47	.01			.15										.02	.03			.19										0.87	
Cuba	Meramec				.30								.30																				0.67	
Dexter	St. Francis					1.39																.07											1.39	
Douglas	Black					.42	.02					.25											.04	.16									0.89	
Farmington	St. Francis				.55			.01									.15	T.				.55	.67	.11								T.	2.04	
Fisk	do						.19					T.									.04	T.		.07		.03	.04			.11			0.34	
Fredericktown	do																				.43			.07									0.61	
Goodland	Black																						.56	.40					.01		.23	.03	3.32	
Greenville	St. Francis				T.	.10												.65					.60	1.97									3.08	
Jackson	Mississippi				1.48			.02										.45					.87	.26										4.65
Koshkonong	Black					.16	1.26					.16						.03			.96		1.92	.11								T.	.05	2.36
Leper	do						.40					.08						.37						1.40	.02								.09	0.55
Licking (near)	Gasconade	.31	.03								.18	T.											.03											1.53
Marble Hill	Mississippi																				.50			.60	.08				.35					1.86
Meramec Park	Meramec		.41		.14				.10													1.03	.05		.13								T.	1.16
Morehouse	Mississippi				.15	.42					T.													.48		.11								0.97
New Madrid	do						.07							T.							.28					.53	.01						.08	1.75
Owensville	Gasconade	.09		1.17					.02													.43	.04											0.35
Parma	St. Francis						.10																				.25							1.00
Poplar Bluff	Black						.07					.04															.07	.29	.53	T.				0.87
Richwoods	Meramec								.87																									2.80
Rolla	do	.06		T.	.43		.01	T.			.32	T.											.42											1.56
St. Louis***	Mississippi			.15	.01	.57					T.	.21											.34											1.06
St. Louis University*	do			T.	.02	.27						.26											.07											.13
Salem	Meramec	T.			T.		.45	.02			.08													.02	.05									.09
St. Louis	Mississippi					.30																												T.
Union	Meramec	.29			.14				.08																									
Valley Park	do	T.			.35	1.09	.03			.02				T.																				
Van Buren	Black												.87																					
West Plains	do				T.		.22					.29																						
Williamsville	do						.68					.05												.62	.26	.13								
Willow Sprgs. (near)	White	.04			.07			.04			1.01																							
Zalma	Mississippi					1.26																												
Calro, Ill.***	do				T.	.02			.24	.01		T.																						

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. || Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. T. Trace, or less than 0.01 inch.  
 \*\*\* Regular U.S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. \*\* Precipitation in the next following measurement; separate dates of fall not recorded. \* Precipitation is for 24-hour period, midnight to midnight † Estimated. ‡ Partially estimated. |||| Incomplete.

Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for August 1937  
 (See precipitation data in table on preceding page)

Station	Data	Day of month																															Monthly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Lakeside ..... (Osage Dam)	Evaporation .....	.301	.300	.159	.391	.230	.334	.250	.020	.322	.328	.159	.269	.337	.203	.398	.313	.319	.347	.405	.359	.237	.099	.136	.177	.248	.282	.176	.311	.293	.282	.214	8.199
	Mean temperature ..	80	83	86	80	82	80	76	85	85	82	81	78	73	80	80	82	85	84	84	81	78	76	78	78	80	81	82	78	80	78	80	80.6
	Wind movement ..	41	56	40	85	46	55	63	44	60	47	53	48	69	45	65	38	70	50	76	82	75	48	46	59	39	52	42	51	46	46	43	1,680

Observations taken at 7.30 a. m. Wind movement corrected to true velocities. For description see April 1932 report.

\*\*\* Evaporation included in next measurement.



Daily Temperatures for August 1937

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Northern Division																																	
Brunswick §§.....	Maximum.....	91	92	101	90	92	91	90	98	96	86	93	85	90	93	96	99	99	96	94	79	87	79	87	91	95	96	96	94	96	95	94	92.3
Chillicothe §§.....	Minimum.....	72	74	74	71	69	68	72	73	73	68	66	64	65	67	68	70	73	75	72	70	67	67	69	69	71	72	68	67	67	70	69.6	
Columbia.....	Maximum.....	93	91	102	89	91	93	92	98	92	88	91	85	91	93	97	100	98	95	89	79	86	80	84	89	95	96	93	93	94	93	91.7	
Fayette.....	Minimum.....	73	73	76	72	68	66	68	71	74	73	67	62	66	66	66	70	72	70	72	70	66	64	65	69	68	70	72	66	64	69	68.9	
Grant City.....	Maximum.....	89	91	96	88	92	90	90	96	94	90	94	81	89	93	95	97	98	96	95	90	86	82	86	91	94	95	94	94	93	92	91.8	
Hannibal.....	Minimum.....	71	73	70	70	68	74	76	74	72	68	66	62	68	69	74	73	75	76	72	70	67	66	70	72	73	73	70	68	70	72	70.7	
Kansas City.....	Maximum.....	88	93	98	87	91	91	86	96	93	88	93	88	88	92	95	98	98	96	94	88	85	80	89	91	96	97	94	94	95	95	94	91.8
Kirksville.....	Minimum.....	73	70	73	79	67	66	69	73	74	70	64	65	58	62	63	64	69	70	70	70	67	64	67	67	66	70	61	61	63	69	67.5	
Lawson.....	Maximum.....	92	90	95	91	93	92	95	91	92	88	87	89	90	97	100	93	94	86	79	85	81	82	90	94	93	95	92	95	95	100	91.2	
Louisiana.....	Minimum.....	71	74	75	70	62	67	75	70	71	73	66	59	63	64	61	72	70	69	69	68	60	61	65	68	69	71	71	68	66	71	67.9	
Macon§§.....	Maximum.....	87	89	89	86	91	91	91	90	89	89	91	84	87	92	91	99	96	94	93	86	82	76	84	88	90	93	91	91	92	92	91	89.6
Maryville.....	Minimum.....	100	100	104	93	98	96	93	100	97	89	93	88	85	96	100	100	98	96	95	82	86	79	86	94	96	97	97	98	96	92	94.2	
Mexico§§.....	Maximum.....	76	79	77	73	72	75	80	77	74	75	72	67	68	70	76	79	80	77	68	72	70	66	68	70	71	72	73	75	76	76	72	73.4
Moberly.....	Minimum.....	89	86	93	92	94	91	90	95	94	91	90	89	91	94	98	96	94	88	76	85	83	87	91	93	95	95	93	94	95	95	91.2	
Oregon.....	Maximum.....	68	70	74	70	64	66	71	72	71	71	68	62	61	64	65	67	73	69	72	70	65	62	64	65	68	67	69	67	63	67	69	67.5
St. Charles §§.....	Minimum.....	96	95	101	91	94	95	88	97	96	90	92	86	86	96	98	98	96	95	90	81	84	76	84	90	92	94	96	94	93	95	91	91.9
St. Joseph.....	Maximum.....	71	74	76	72	68	69	74	72	72	73	67	62	63	66	71	74	73	72	69	68	65	63	65	67	69	71	72	67	66	71	70	69.4
Trenton.....	Minimum.....	90	87	90	90	93	95	96	98	95	90	97	83	90	93	98	100	98	96	95	82	86	79	86	94	96	97	97	98	96	92	94.2	
Unionville §§.....	Maximum.....	70	65	74	68	58	67	72	67	65	65	62	58	52	58	65	62	70	69	69	72	70	66	68	65	62	62	68	60	57	65	62	65.4
Warrenton.....	Minimum.....	88	87	99	89	93	90	92	95	92	90	91	84	91	92	95	99	99	95	91	80	85	78	81	94	91	93	94	91	93	94	91.0	
Appleton City.....	Maximum.....	93	90	98	91	93	90	94	95	92	95	90	87	89	92	96	98	104	93	98	98	89	85	83	89	94	95	98	94	96	99	95	92.9
Clinton.....	Minimum.....	71	70	75	72	64	62	70	75	74	70	70	69	64	61	65	70	70	71	75	70	69	70	69	68	68	70	65	65	69	73	73	72.1
Eldon§§.....	Maximum.....	98	101	97	91	97	97	94	96	95	93	91	87	88	98	102	101	97	96	88	82	84	77	81	90	92	93	96	94	94	94	92.9	
Garber.....	Minimum.....	72	71	76	74	64	66	72	72	73	72	67	61	64	65	67	68	71	69	71	70	63	61	66	68	67	68	71	66	67	66	70	68.3
Harrisonville§§.....	Maximum.....	91	85	95	94	96	92	94	95	94	91	92	87	90	94	97	101	93	96	89	78	86	83	85	92	95	98	94	96	96	96	96	92.3
Jefferson City §§.....	Minimum.....	70	71	74	70	65	67	68	71	71	72	67	60	62	66	69	70	73	70	70	70	64	60	62	67	68	69	70	66	66	69	70	68.0
Warrenton.....	Maximum.....	85	91	92	89	90	90	88	89	85	92	95	91	90	94	96	97	94	96	95	95	82	81	85	90	93	95	92	94	96	93	90	91.5
Appleton City.....	Minimum.....	70	68	72	68	66	63	70	74	72	68	69	65	61	64	66	70	74	70	73	71	66	68	67	69	70	70	66	67	69	70	68.6	
Southwestern Division																																	
Appleton City.....	Maximum.....	98	96	99	91	94	94	90	96	99	98	99	88	89	95	99	96	98	96	91	84	87	78	85	90	94	97	98	94	94	93	92	93.3
Clinton.....	Minimum.....	71	72	73	69	70	69	71	73	68	71	67	65	56	69	67	69	68	69	69	68	70	65	65	66	67	67	68	65	61	65	67	67.7
Eldon§§.....	Maximum.....	96	98	99	94	94	95	91	95	98	94	96	91	84	93	98	96	99	96	92	85	88	83	85	91	96	98	94	96	94	94	93.6	
Garber.....	Minimum.....	72	72	75	70	72	70	71	74	70	72	68	67	60	68	62	69	68	71	71	70	68	64	65	67	69	67	68	65	64	67	66	68.5
Harrisonville§§.....	Maximum.....	86	96	100	93	94	93	84	97	100	94	95	85	90	93	96	98	100	97	95	93	84	82	85	89	93	95	92	91	94	91	91	92.5
Jefferson City §§.....	Minimum.....	71	69	72	69	69	66	69	71	72	69	67	66	58	56	59	69	71	71	70	69	67	65	68	68	67	68	64	64	65	66	67.3	
Marshall.....	Maximum.....	98	97	100	91	95	97	91	97	104	105	94	92	94	95	98	99	99	95	96	96	98	98	91	90	99	100	101	95	95	91	92	95.9
Mountain Grove.....	Minimum.....	66	68	68	66	64	64	65	67	65	64	67	69	53	67	61	66	66	64	63	56	78	70	68	62	65	68	63	60	62	66	65.0	
Neosho.....	Maximum.....	96	98	99	92	94	92	91	98	96	85	90	87	83	95	96	97	98	95	93	78	85	78	81	90	93	94	97	95	94	94	91.6	
Springfield.....	Minimum.....	74	73	74	70	70	73	71	73	73	66	64	63	66	68	70	70	70	73	69	69	63	64	65	67	70	68	69	67	68	69	69.0	
Warrenton.....	Maximum.....	81	91	96	90	90	89	86	93	96	91	95	86	96	95	97	98	98	95	93	84	82	85	90	91	96	93	95	96	93	94	91.8	
Appleton City.....	Minimum.....	73	67	74	68	69	63	65	73	73	68	66	65	56	62	65	68	71	71	73	71	68	66	65	67	67	68	63	63	68	68	67.5	
Lebanon.....	Maximum.....	100	101	101																													







WMS

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U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

# CLIMATOLOGICAL DATA

19  
**MISSOURI SECTION**  
ROSCOE NUNN  
ST. LOUIS, MO.  
VOL. XLI SEPTEMBER 1937 No. 9  
PRICE: 5 CENTS A COPY; 25 CENTS A YEAR

## GENERAL SUMMARY

Following an unusually warm August, the first ten days of September were also much warmer than normal. High temperatures prevailed again on the 21st, 22d, and 23d, and also on the last day or two of the month. Maximum readings were occasionally in the high nineties and in some localities up to 100° as late as the 22d. However, the average temperature for the month was very little above normal, due to cool periods occurring from the 11th to the 20th and from the 25th to the 28th. The warm periods were more intense in the extreme western and northwestern sections than elsewhere. On two or three days unseasonably low temperatures occurred, with a little frost in spots, principally on the 17th, 26th, and 27th, in various sections, and heavy to killing frost in a few places. Damage from frost was slight.

An outstanding and unfortunate feature of the month was the continued lack of rainfall in most parts of the northern and central portions of the State, especially in the Gasconade and the Osage drainage basins and the northwestern counties. While excessive rains fell in the southwestern corner of the State (counties of Barry, McDonald, and Newton) and considerably more than normal rainfall occurred in the southeastern counties of Ripley, Dunklin, Pemiscot, New Madrid, and Mississippi, most of the northwestern quarter received less than one inch during the month, and several stations in that area received only about one-half inch. Another very dry area included the counties of Maries, Pulaski, Laclede, Dallas, Hickory, and their bordering areas.

River stages were very low. At St. Louis the average stage for the month was 1.1 feet below zero, which is the lowest September average of record, years 1860 to 1937.

The drought damaged late corn, alfalfa, fall-sown legumes, pastures, gardens, and apples. At the end of the month, early corn was mostly in shock, and yields were generally good, but the late crop was poor to fair for the most part. Fruit crops were unusually large, but size and quality of apples were hurt considerably by drought. Sowing of wheat was seriously delayed by the dry, hard ground in some localities. Some early-sown wheat was up but making little growth.

## TEMPERATURE

The monthly mean temperature for the State, 75 stations reporting, was 69.4°, or 0.2° above normal. The highest monthly mean was 73.0° at Campbell, and the lowest monthly mean was 66.0° at Greenville. The highest temperature recorded was 103° at Grant City on the 3d, and the lowest was 29° at Louisiana on the 17th. The greatest daily range was 57° at Mexico on the 21st.

## PRECIPITATION

The average precipitation for the State, 134 stations reporting, was 2.41 inches, or 1.74 inches less than normal. The greatest local monthly amount was 12.37 inches at Hailey, and the least local monthly amount was 0.21 inch at Kansas City. The greatest amount in any twenty-four hours was 5.38 inches at Neosho on the 8-9th. The average number of days with 0.01 inch or more of precipitation was 5. There was no snowfall recorded in the State.

## MISCELLANEOUS PHENOMENA

Aurora.—10th.  
Fog.—Dense, 11th, 14th, 26th, 27th.  
Frost.—Light, 16th, 17th, 18th, 26th, 27th, 28th; heavy, 26th, 27th; killing, locally, 17th, 26th, 27th.  
Hail.—Light, on 28th at Appleton City, St. Joseph, Sedalia, Stover, and Versailles.  
Halos.—Solar, 1st, 2d, 7th, 23d, 24th, 26th; lunar, none.  
(Continued on page 44)

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind			Relative humidity			Percentage of sunshine	
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12 noon		6:30 p. m.
Columbia.....	30.04	30.36	26	29.72	18	7.3	21	nw.	10	76	45	43	73
Kansas City.....	30.02	30.39	25	29.71	18	8.6	27	sw.	18	75	42	40	82
St. Joseph.....	30.03	30.44	25	29.71	18	7.9	21	nw.	24	73	42	40	75
St. Louis.....	30.05	30.34	27	29.69	10	11.0	29	sw.	24	73	49	48	68
Springfield.....	30.04	30.34	26	29.78	18	9.0	21	se.	28	80	48	54	68
Cairo, Ill.....	30.04	30.34	29	29.73	10	7.5	31	nw.	10	62	75	74	72
Keokuk, Iowa..	30.05	30.37	26	29.68	18	6.9	20	sw.	18	74	45	46	84

## COMPARATIVE DATA FOR SEPTEMBER

Year	Temperature			Precipitation					Number of days				
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy	
1888.....	65.2	97	28	1.01	1.13	0.87	1.02	0	4	..	..	..	..
1889.....	64.7	94	32	4.68	5.55	4.66	3.83	0	11	..	..	..	..
1890.....	63.7	98	30	4.36	3.25	5.49	4.34	0	9	..	..	..	..
1891.....	70.6	104	34	0.72	0.53	0.90	0.72	0	6	..	..	..	..
1892.....	67.8	97	32	2.46	2.73	2.71	1.93	0	4	19	6	5	..
1893.....	69.9	107	26	4.07	3.50	3.96	4.74	0	6	17	7	6	..
1894.....	68.5	101	34	4.94	4.16	6.42	4.23	0	8	13	11	6	..
1895.....	71.8	104	24	2.38	2.04	2.43	2.66	0	4	19	8	3	..
1896.....	65.0	101	28	4.09	4.67	3.92	3.69	0	10	11	10	9	..
1897.....	74.3	105	27	0.67	0.97	0.61	0.43	0	2	23	5	2	..
1898.....	70.9	103	37	6.70	6.76	7.25	6.10	0	9	15	9	6	..
1899.....	67.4	108	21	1.96	2.27	1.79	1.81	0	4	20	6	4	..
1900.....	71.1	100	29	4.59	4.77	5.56	3.44	0	10	13	10	7	..
1901.....	68.9	103	27	2.16	2.41	2.75	1.31	0	6	18	8	4	..
1902.....	63.2	95	30	4.63	4.74	5.36	3.79	0	10	15	6	9	..
1903.....	66.6	98	32	4.16	5.64	3.56	3.28	0	8	17	6	7	..
1904.....	69.6	96	34	3.77	4.72	2.78	3.82	0	7	16	8	6	..
1905.....	69.6	98	41	7.40	8.20	8.36	5.64	0	10	15	6	9	..
1906.....	71.9	98	36	4.53	3.54	3.75	6.31	0	11	15	8	7	..
1907.....	68.9	101	31	2.06	2.35	1.62	2.20	0	6	18	7	5	..
1908.....	71.6	99	28	2.15	1.49	2.69	2.27	T.	4	18	8	4	..
1909.....	68.7	105	28	4.48	5.30	3.35	4.79	0	8	18	6	6	..
1910.....	69.5	97	34	5.45	5.90	6.44	4.01	0	10	14	6	10	..
1911.....	73.7	105	39	6.27	8.17	5.98	4.65	0	11	13	7	10	..
1912.....	68.6	105	27	3.11	2.72	2.87	3.74	0	6	17	5	8	..
1913.....	69.4	109	27	4.75	3.74	4.64	5.88	0	9	13	7	10	..
1914.....	69.6	99	35	6.06	7.19	6.01	4.98	0	9	15	8	7	..
1915.....	70.6	98	34	5.18	6.21	6.98	2.40	0	7	16	7	7	..
1916.....	67.8	101	27	2.97	2.73	3.18	2.99	0	6	19	7	4	..
1917.....	67.9	101	33	2.76	2.97	3.64	1.66	0	5	19	6	5	..
1918.....	62.3	96	29	4.83	4.11	5.44	4.95	0	7	17	6	7	..
1919.....	71.4	104	38	3.14	4.13	1.95	3.34	0	5	20	6	4	..
1920.....	70.0	100	31	4.60	4.37	5.78	3.64	0	9	17	7	6	..
1921.....	73.4	104	34	6.94	8.05	7.03	5.71	0	13	13	9	8	..
1922.....	71.7	107	31	3.10	3.95	3.62	1.74	0	5	21	5	4	..
1923.....	68.7	98	33	4.44	4.84	4.75	3.74	0	11	12	9	9	..
1924.....	61.0	96	29	3.79	3.41	4.55	3.40	0	8	14	8	8	..
1925.....	74.6	110	45	6.56	5.84	6.48	7.37	0	10	14	6	10	..
1926.....	69.3	97	27	8.64	11.74	9.12	5.06	0	13	12	7	11	..
1927.....	71.6	102	29	3.72	3.11	3.41	4.65	0	8	17	7	6	..
1928.....	65.0	95	28	2.50	5.36	1.62	0.53	0	5	20	7	3	..
1929.....	67.4	98	33	3.16	3.16	2.83	3.48	0	8	13	10	7	..
1930.....	71.3	105	37	4.28	2.86	5.48	4.49	0	8	16	7	7	..
1931.....	75.0	104	36	3.91	5.97	3.18	2.58	0	7	19	7	8	..
1932.....	67.8	99	33	2.56	2.08	2.04	3.57	0	6	17	8	5	..
1933.....	74.6	102	36	4.69	3.00	4.92	6.16	0	9	16	8	6	..
1934.....	65.6	95	32	7.39	7.49	7.79	6.89	0	12	12	8	10	..
1935.....	68.1	98	33	3.51	4.30	3.13	3.10	0	6	20	4	6	..
1936.....	73.6	109	37	8.62	8.76	9.98	7.12	0	11	11	9	10	..
1937.....	69.4	103	29	2.41	1.12	2.53	3.57	0	5	18	7	5	..
Period.....	69.2	110	21	4.15	4.36	4.32	3.76	T.	8	16	7	7	..

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Climatological Data for September 1937

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches				Number of days				Prevailing direction of wind	Observers	
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelted	With precip., .01 inch or more	Clear	Partly cloudy			Cloudy
Northern Division																				
Bethany	Harrison	916	42	68.9	+ 1.8	101	22	32	26	43	0.51	-4.05	0.37	0	2	20	7	3	sw.	A. S. Cumming
Brunswick	Chariton	652	56	69.6	+ 2.6	100	22	38	26†	48	1.14	-3.67	0.53	0	4	18	4	8	ne.	O. K. Becke
Chillicothe	Livingston	779	28	69.2	+ 1.7	101	22	34	26	47	0.56	-4.22	0.30	0	4	20	7	3	e.	Win. J. Olenhouse
Clifton Hill	Randolph	731	38	67.4	+ 1.2	95	1	37	26	38	1.39	-3.15	1.05	0	4	21	6	3	e.	Dr. A. J. Bradsher
Columbia	Boone	740	47	69.9	+ 1.7	97	22	41	26	34	1.92	-2.43	1.32	0	4	14	11	5	s.	U. S. Weather Bureau
Conception	Nodaway	980	48	70.1	+ 2.9	99	22	36	26	39	0.52	-4.12	0.33	0	2	21	7	2	se.	Fr. Adelmhelm Hess
Downing	Schuyler	876	16	67.0†	+ 0.6	99	22	35	26	47	2.18	-3.01	2.14	0	2	15‡	3‡	1‡	sw.	Everett Rowe
Edgerton	Platte	856	17	69.6‡	+ 1.7	101	22	31	26	45	0.54	-4.05	0.38	0	3	26	2	2	ne.	Fred L. Stiff
Elsberry	Lincoln	449	6	66.6	.....	94	1†	31	17	50	1.19	.....	0.67	0	2	20	9	1	ne.	Ray E. Mills
Fayette	Howard	680	57	68.8	+ 0.7	100	22	33	17	47	1.32	-3.64	0.92	0	3	13	13	4	se.	Harry P. Mason
Fulton	Callaway	818	49	70.0	+ 1.1	98	1†	35	17	47	1.35	-3.14	1.20	0	4	17	8	5	se.	Clyde C. Herring
Gorin	Scotland	700	50	.....	.....	.....	.....	.....	.....	.....	1.27	-3.40	0.97	0	2	26	2	2	uw.	W. L. Harker
Graut City	Worth	1,134	33	69.2	+ 2.2	103	3	31	26	45	0.73	-3.96	0.33	0	3	11	14	5	se.	Howard Rybolt
Hannibal	Marion	759	45	68.1	+ 0.7	96	22	38	26	39	1.05	-2.92	0.90	0	3	16	3	11	n.	Hannibal Water Dept.
Kansas City	Jackson	741	48	72.0	+ 3.1	100	22	39	26	37	0.21	-4.35	0.09	0	3	14	10	6	ne.	U. S. Weather Bureau
Kidder	Caldwell	1,020	45	68.6	+ 1.3	98	22	36	26	39	0.39	-4.81	0.17	0	2	23	4	3	n.	Roscoe L. Terry
King City	Gentry	1,095	11	.....	.....	.....	.....	.....	.....	.....	0.60	-4.82	0.37	0	2	16	12	2	se.	John M. Martin
Kirksville	Adair	969	48	66.8†	+ 0.5	96	22	34	26	42	1.97	-3.21	0.99	0	2	19‡	8‡	2‡	nw.	Charles Noble
Lawson	Ray	1,050	0	70.0	.....	98	22	37	26	38	0.60	.....	0.36	0	2	15	9	6	se.	Elmer E. Lamb
Linneus	Lin	816	5	.....	.....	.....	.....	.....	.....	.....	0.94	.....	0.67	0	4	24	5	1	nw.	H. D. Taggart
Louisiana	Pike	469	43	66.4	+ 1.6	98	22	29	17	53	1.55	-2.88	1.30	0	2	18	9	3	w.	Stark Bros. Nurseries
Macon	Macon	875	38	67.2	+ 0.7	98	22	37	26	48	1.35	-3.09	0.77	0	4	24	5	1	w.	W. C. Brown
Maryville	Nodaway	1,169	47	69.2	+ 3.6	100	22	37	26	43	0.72	-3.96	0.55	0	2	19	9	2	se.	R. B. Montgomery
Mexico	Audrain	800	48	68.4	+ 0.1	100	21	36	26	57	1.39	-3.58	1.36	0	2	29	0	1	s.	Mrs. Abbie Snoddy
Moberly	Randolph	875	0	66.2	.....	92	1†	32	17	37	1.42	.....	1.19	0	2	19	8	3	s.	McDonnick Hospital
Monroe City	Monroe	748	16	.....	.....	.....	.....	.....	.....	.....	0.88	-3.94	0.88	0	1	19	7	4	e.	J. S. Conway
Oregon	Holt	1,048	81	70.3	+ 3.2	100	22	39	26	38	0.62	-4.48	0.35	0	3	23	6	1	sw.	Miss Mina Wright
St. Charles	St. Charles	520	49	70.1	+ 1.8	98	22	37	17	51	0.76	-3.08	0.54	0	3	22	8	0	ue.	Martin L. Comann
St. Joseph	Buchanan	957	27	70.9	+ 2.5	99	22	37	26	35	0.82	-3.10	0.40	0	3	24	2	4	s.	U. S. Weather Bureau
Shelbina	Shelby	779	44	.....	.....	.....	.....	.....	.....	.....	1.37	-3.57	0.83	0	3	.....	.....	.....	.....	J. C. Jewett
Steffenville	Lewis	650	39	67.4	+ 1.6	97	2	34	26	42	1.27	-3.23	0.75	0	3	17	11	2	n.	Frank Hall
Tarkio	Atchison	916	34	68.4	+ 2.1	99	22	33	26	41	1.04	-3.20	0.48	0	3	18	10	2	se.	Albert Volker
Trenton	Grundy	822	41	69.0	+ 1.8	100	22	33	26	41	1.06	-3.69	0.41	0	4	19	9	2	s.	W. H. Estes
Unionville	Putnam	1,062	44	67.0	+ 0.1	100	22	34	26	51	0.36	-4.73	0.28	0	2	21	2	7	s.	John H. Schick
Warrenton	Warren	816	55	69.8	+ 0.8	96	1	41	27	39	0.97	-3.39	0.45	0	4	15	13	2	ue.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.	574	66	67.4	+ 0.1	94	1	40	27	36	1.47	-2.37	0.75	0	3	16	6	8	se.	U. S. Weather Bureau
Division means and extremes				68.7	+ 1.1	103	3	29	17	57	1.12	-3.24	2.26	0	3	19	7	4	se.	
Southwestern Division																				
Appleton City	St. Clair	853	42	69.6	- 0.8	98	22	35	27	41	1.56	-2.82	0.88	0	5	21	0	6	sw.	Rolla Brown
Buffalo	Dallas	1,200	7	.....	.....	.....	.....	.....	.....	.....	0.30	.....	0.20	0	3	25	1	4	.....	C. M. McCallister
Caplinger Mills	Cedar	750	11	.....	.....	.....	.....	.....	.....	.....	1.67	-2.05	0.63	0	4	18	6	6	se.	Ozark Utilities Co.
Clinton	Henry	765	44	70.8	+ 0.0	99	22	36	26†	42	1.47	-3.05	1.07	0	4	.....	.....	.....	.....	U. S. Weather Bureau
Concordia	Lafayette	784	22	.....	.....	.....	.....	.....	.....	.....	1.93	-2.57	0.89	0	4	24	3	3	e.	Miss Ora Stratman
Dean H.	McDonald	1,000	33	70.0	+ 1.0	97	4	33	26	46	7.04	+3.16	3.12	0	11	13	10	7	ne.	E. S. Taylor
Elton	Miller	934	42	69.6	+ 0.2	99	22	38	27	49	2.17	-2.45	2.00	0	3	14	8	8	n.	E. H. Shepherd
Garber	Taney	950	2	70.2	.....	97	22	34	27	41	2.66	.....	1.46	0	5	6	11	13	e.	William H. Durham
Hailey†	Barry	1,350	12	.....	.....	.....	.....	.....	.....	.....	12.37	+8.60	4.88	0	7	15	14	1	w.	A. W. Madison
Harrisonville	Cass	904	59	68.9	+ 0.4	99	22	39	26	47	0.89	-4.01	0.59	0	5	13	10	7	se.	John H. Patterson
Jefferson City	Cole	557	47	69.0	- 0.3	98	22	37	27	44	2.23	-2.00	2.20	0	3	21	8	1	ne.	Mrs. Frank Kliegel
Lamar	Barton	980	49	71.5	+ 0.7	101	3†	35	26	44	2.33	-2.22	0.90	0	9	19	4	7	ne.	Jesse A. Mann
Lebanon	Laclede	1,265	49	70.2	+ 0.8	98	1†	34	26†	39	0.89	-3.60	0.32	0	4	16	10	4	ne.	Mrs. Rosa E. Montelius
Lexington	Lafayette	688	52	70.8	+ 2.0	101	22	40	26†	47	1.16	-3.61	0.72	0	6	23	7	0	s.	Miss Carrie Loomis
Lockwood	Dade	1,078	31	71.5	+ 0.6	97	4†	39	26†	33	1.38	-3.40	0.57	0	5	19	8	3	se.	Hubert A. Nieman
Marshall	Saline	779	50	70.9	+ 2.1	99	22	38	26	39	1.55	-3.95	0.82	0	3	23	4	3	se.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	36	70.2	+ 1.3	99	22	36	27	36	1.70	-2.36	1.21	0	5	17	11	2	se.	Mo. Fruit Exp. Sta.
Neosho	Newton	1,011	50	70.5	+ 0.0	95	4	35	26†	38	8.66	+4.37	5.38	0	11	19	7	4	se.	U. S. Fisheries Sta.
Nevada	Vernon	862	44	71.4	+ 1.9	100	3	36	26	42	2.00	-2.31	1.00	0	4	17	8	5	sw.	T. J. Kaupp
Sedalia	Pettis	910	17	71.4	+ 2.2	100	22	37	26	37	4.31	-0.59	2.50	0	3	19	7	4	s.	Mrs. Laura S. Trader
Sellman	Barry	1,542	36	68.6‡	- 1.0	88	1†	38	27	31	9.42	+5.74	2.91	0	10	16‡	7‡	5‡	se.	Floyd E. Fawver
Seymour(near)	Webster	1,642	31	68.4	- 0.4	94	22	34	27	35	1.66	-2.36	1.16	0	8	14	6	10	se.	A. L. Hailey
Springfield	Greene	1,301	49	70.0	+ 1.1	93	22	42	26	26	2.63	-0.89	1.83	0	7	14	9	7	se.	U. S. Weather Bureau
Versailles	Morgan	1,037	11	70.4	+ 0.3	101	22	36	26	38	1.49	-3.07	1.15	0	5	18	6	6	e.	I. M. Wilson
Warrensburg	Johnson	878	50	71.7	+ 1.5	100	22	37	26	42	1.32	-3.46	1.15	0	4	21	5	4	ne.	E. A. Markey
Warsaw	Benton	687	36	71.8	+ 1.3	101	22	38	26†	46	0.98	-4.05	0.75	0	4	20	4	6	sw.	Everett Martin
Division means and extremes				70.3	+ 0.6	101	3†	33	26	49	2.53	-1.79	5.38	0	5	18	7	5	se.	
Southeastern Division																				
Arcadia	Iron	926	56	66.2	- 1.4	91	22	33	27	47	3.02	-0.96								



## Day of month

Continued on next page



## Daily Precipitation for September 1937—Continued from preceding page

Stations	Drainage-basins	Day of month																															Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	..	
Southeastern Div.—Concluded																																	
Caruthersville	Mississippi..	.26		.10	.55						.50					.05									1.20	.70							3.36
Centerville	Black		.23	.25	1.09						.35	.01													.63								2.56
Crystal City	Mississipl..			.05				.25			.15	.08													.15	.93							1.46
Cuba	Meramec										.75	.35													.35								1.10
Dexter	St. Francis		.39	.92	.09						.57							T.							2.29								4.26
Douiplau	Black	1.59	.06	3.45	.62				T.		2.17														.32	1.48							6.09
Farmington	St. Francis	T.	.09	.31							.44														.03	.21							1.08
Fisk	do	.26	.44	T.	.43	.08	T.		T.		.63	.17													3.74	.33							6.08
Fredericktown	do		.20	1.02	.30						.70	.90													1.25								4.37
Goodland	Black		.10	.42	.05						1.25														.74	.40							2.96
Greenville	St. Francis	.73	.12	.26	.06						.61	.34													1.76								3.88
Jackson	Mississippi	.10	.01	.14	.58						1.65														2.05								4.53
Koshkonong	Black	.75	.31			1.31					.16														.98								3.51
Leeper	do			1.09	.08	.70					.43	.09													1.10	.18							3.67
Licking (near)	Gasconade..	.21	.07					.08	.13																2.27								2.76
Marble Hill.	Mississippi		.15	.50	.30						.65	.60													1.95								4.15
Meramec Park	Meramec		.30	.98							.28														.99								2.55
Morehouse	Mississippi	.51	.09	.77							1.14	1.38													T.	2.87							6.76
New Madrid	do	.17	.47	.31	.68					.03	.06	.95					.04	T.							.73	.52							3.96
Owensville	Gasconade..			.17							.24														.16								0.57
Parma	St. Francis	.10	.13	1.18	.76						.96	T.					.13								2.80	.20							6.26
Poplar Bluff	Black	.51	.79	.10	1.29						.92						.04								.93	.13							4.71
Richwoods	Meramec			.25							.50														1.67								2.47
Rolla	do	T.	.07	T.					T.	T.	.57														.07	.22			T.				0.93
St. Louis***	Mississippi	.03	T.	.27							1.04														.60	.08			T.				2.02
St. Louis University*	do	.02	T.	.26							.89						.70	T.							.70	T.			T.				1.87
Salem	Meramec	.07	1.37								.52														.95	.75							3.66
Sikeston	Mississippi	.10		1.28	1.08						.17	.95													2.20	.40							6.18
Union	Meramec		.02	.63							.65														.11	.14							1.55
Valley Park	do	T.		T.	T.						.35														.03				T.				0.38
Van Buren	Black	.42		2.10							.40														.32								3.24
West Plains	do	.73	.58	.10	.15					T.	.24														T.	.30							2.10
Williamsville	do	.08	.81	.02	.35	.01					.17	.02													1.18	.16							2.80
Willow Sprgs. (near)	White		.51	.17							.54														1.18					.08			2.48
Zalma	Mississippi		.52		.43						.70	.35													2.40								4.40
Cairo, Ill.***	do	T.	.80	.49	.06		T.		T.		.87														.08	.88							3.18

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. || Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. T. Trace, or less than 0.01 inch.  
 \*\*\* Regular U.S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. \*\* Precipitation in the next following measurement; separate dates of fall not recorded. \* Precipitation is for 24-hour period, midnight to midnight † Estimated. ‡ Partially estimated. |||| Incomplete.

**Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for September 1937**  
 (See precipitation data in table on preceding page)

Station	Data	Day of month																														Monthly	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		..
Lakeside ..... (Osage Dam)	{ Evaporation .....	189	189	192	194	207	153	237	146	074	186	323	262	235	225	451	295	247	252	231	266	221	196	277	276	028	201	147	146	116	247	....	6.409
	{ Mean temperature	82	79	81	80	74	73	73	76	76	81	70	68	63	66	70	58	60	68	71	66	72	78	77	72	58	52	54	60	66	72	..	69.8
	{ Wind movement ..	42	38	53	41	65	49	46	44	62	41	89	73	66	50	90	61	58	49	77	57	37	52	50	98	73	73	48	52	53	64	..	1,751

Observations taken at 7.30 a. m. Wind movement corrected to true velocities. For description see April 1932 report.

\*\*\*\* Evaporation included in next measurement.

*Continued from page 41*

Smoke.—Dense, 28th.

Thunderstorms.—Local, 1st, 2d, 3d, 5th, 8th, 9th, 10th, 11th, 17th, 22d, 24th, 29th; more or less general, 4th, 28th.  
 Windstorms.—No damaging winds reported.



Daily Temperatures for September 1937

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	..	Mean		
Northern Division																																		
Brunswick §§.....	Maximum...	96	95	95	90	91	88	88	91	90	86	85	79	78	90	81	69	79	89	80	83	95	100	94	69	64	66	69	72	80	89	..	84.0	
Chillicothe §§.....	Minimum...	72	73	71	71	64	60	60	61	68	67	56	47	47	49	43	42	43	54	47	47	54	65	68	47	38	38	42	49	53	..	55.1		
.....	Maximum...	95	95	96	86	86	86	85	81	88	84	87	77	75	89	81	71	81	89	75	83	96	101	92	70	67	68	70	79	81	91	..	83.8	
Columbia .....	Minimum...	72	72	68	71	59	51	56	65	65	72	50	55	42	49	54	39	40	53	49	43	49	63	68	55	44	34	39	48	48	59	..	54.5	
.....	Maximum...	94	94	90	90	81	85	89	89	86	89	83	75	75	86	81	67	75	86	77	81	92	97	89	76	63	63	66	68	81	87	..	81.8	
Fayette.....	Minimum...	75	72	71	71	65	62	63	69	67	64	56	57	49	52	54	43	41	54	56	50	59	68	73	57	45	41	44	47	53	62	..	58.0	
.....	Maximum...	97	95	91	91	80	84	90	91	90	88	81	74	75	88	82	71	78	89	80	82	94	100	94	85	69	64	68	69	81	89	..	83.7	
Grant City .....	Minimum...	70	67	68	67	63	59	57	67	62	71	54	57	46	42	50	40	33	43	56	45	47	57	61	57	47	39	35	46	49	56	..	53.8	
.....	Maximum...	98	100	103	85	82	90	85	90	88	83	87	81	77	94	81	70	76	88	75	82	95	99	88	83	63	62	64	65	77	86	..	84.4	
Hannibal .....	Minimum...	73	75	69	66	58	56	58	64	63	67	45	52	46	49	51	33	40	52	47	41	52	66	72	55	42	31	44	48	46	62	..	54.1	
.....	Maximum...	94	92	88	86	78	84	85	88	90	90	80	74	72	86	80	68	75	85	80	76	92	96	88	83	63	62	64	65	77	86	..	80.9	
Kansas City .....	Minimum...	73	73	71	71	59	55	58	59	62	73	56	57	49	50	57	40	40	50	52	43	53	67	71	58	46	38	39	47	49	60	..	55.9	
.....	Maximum...	97	98	97	85	76	85	92	90	84	81	87	76	78	90	82	71	79	89	78	86	95	100	94	80	64	67	72	74	82	88	..	83.9	
Kirksville .....	Minimum...	74	76	73	71	66	64	65	71	70	65	55	58	51	54	54	46	49	59	57	49	59	74	79	55	46	39	53	55	67	..	60.2		
.....	Maximum...	95	91	95	87	80	86	..	92	88	86	84	73	75	86	82	65	75	86	77	80	92	96	85	80	67	66	70	79	86	..	81.7		
Lawson .....	Minimum...	71	69	..	..	..	..	..	59	72	52	45	45	40	52	37	37	51	49	41	50	59	81	58	44	34	39	45	44	62	..	51.8		
.....	Maximum...	95	95	96	86	78	85	87	89	86	83	86	77	77	88	81	69	78	82	78	84	93	98	91	85	65	67	71	73	80	87	..	83.2	
Louisiana .....	Minimum...	71	71	69	71	62	60	60	67	65	71	51	55	47	53	57	40	48	53	52	46	56	67	73	57	44	37	45	48	51	59	..	56.9	
.....	Maximum...	95	94	90	89	77	84	84	90	93	91	80	70	67	87	75	70	75	88	80	76	93	98	90	85	62	60	65	64	85	90	..	81.6	
Macon §§.....	Minimum...	67	66	67	67	60	52	50	60	57	72	57	54	39	37	39	30	25	48	54	36	40	56	68	61	50	34	30	40	45	55	..	51.3	
.....	Maximum...	96	96	91	90	80	83	85	91	88	83	73	66	62	78	86	80	67	76	86	74	78	91	98	89	69	64	66	69	80	88	..	81.4	
Maryville .....	Minimum...	71	71	66	67	56	51	54	57	59	63	53	56	42	48	54	42	41	48	55	40	43	59	68	67	61	46	37	40	41	45	52	..	53.0
.....	Maximum...	92	94	98	85	79	83	84	88	88	82	86	82	77	89	80	68	79	86	76	81	96	100	87	84	62	66	70	75	77	92	..	82.9	
Mexico §§.....	Minimum...	71	69	69	68	60	56	60	65	64	67	48	50	45	50	55	41	42	52	49	48	53	68	68	57	43	37	45	49	46	65	..	55.4	
.....	Maximum...	98	95	92	95	80	85	90	92	92	93	85	75	75	88	83	70	78	90	76	80	100	95	91	78	68	67	69	70	86	90	..	84.2	
Moberly .....	Minimum...	72	68	69	68	61	55	55	59	63	70	53	57	42	41	51	39	42	48	40	43	56	56	71	46	36	38	45	45	51	..	52.6		
.....	Maximum...	92	92	91	90	78	83	84	87	85	80	76	68	61	78	81	73	69	78	78	75	86	90	88	81	66	66	70	80	88	..	79.7		
Oregon .....	Minimum...	69	62	66	66	59	56	57	61	58	71	52	58	41	43	54	37	32	48	51	40	54	63	69	56	44	34	34	44	47	59	..	52.8	
.....	Maximum...	95	98	94	83	80	83	86	90	87	83	89	78	80	91	78	69	80	89	78	85	96	100	88	83	65	70	73	78	81	90	..	84.1	
St. Charles §§.....	Minimum...	73	73	72	74	65	58	61	66	61	72	57	56	49	47	56	45	47	55	45	46	47	56	67	77	83	94	99	91	80	81	89	..	83.5
.....	Maximum...	95	95	97	82	80	85	86	90	84	83	88	77	78	90	78	69	79	88	79	87	94	99	91	80	64	67	71	78	81	89	..	83.2	
Trenton .....	Minimum...	76	75	74	69	63	60	61	68	67	64	53	56	51	58	52	43	47	59	54	49	62	70	76	52	46	37	50	50	67	..	58.6		
.....	Maximum...	96	95	97	88	79	84	86	92	90	82	88	76	78	90	84	70	79	82	75	81	94	100	92	80	65	67	68	76	79	92	..	83.5	
Unionville §§.....	Minimum...	70	71	68	69	59	54	57	63	63	70	52	53	45	47	55	49	40	48	47	44	50	63	67	59	43	33	40	47	44	61	..	54.4	
.....	Maximum...	97	95	92	82	75	82	84	88	87	83	81	71	71	82	85	82	65	72	90	72	86	99	100	94	74	64	63	74	65	82	92	..	81.6
Warrenton .....	Minimum...	72	72	68	69	54	54	55	61	63	66	50	53	45	49	52	36	40	48	46	44	45	56	64	66	42	34	36	43	45	46	..	52.5	
.....	Maximum...	96	92	84	90	81	84	87	90	91	91	82	79	73	83	81	76	75	85	83	78	92	95	90	84	64	62	67	71	83	90	..	82.7	
.....	Minimum...	73	72	69	69	63	56	61	65	63	73	55	57	48	50	56	43	44	47	57	45	53	65	70	63	50	48	41	44	52	58	..	57.0	
Southwestern Division																																		
Appleton City .....	Maximum...	94	94	96	95	86	86	87	82	83	88	86	78	79	85	88	70	79	86	82	86	92	98	94	83	65	66	72	70	85	90	..	84.2	
.....	Minimum...	69	67	66	68	65	63	64	69	61	69	51	47	46	46	53	42	51	48	57	42	51	61	66	55	46	37	35	46	52	54	..	55.1	
Clinton .....	Maximum...	96	95	96	95	86	89	88	85	83	88	86	81	80	87	87	75	80	87	82	87	96	99	96	84	65	67	73	67	83	89	..	85.1	
.....	Minimum...	70</																																







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U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

# CLIMATOLOGICAL DATA

19  
MISSOURI SECTION  
ROSCOE NUNN  
ST. LOUIS, MO.  
VOL. XLI OCTOBER 1937 No. 10  
PRICE: 5 CENTS A COPY; 25 CENTS A YEAR

## GENERAL SUMMARY

Fluctuations in temperature were unusually strong this month, with unseasonably warm days on the 1st, 5th, 29th, 30th, and 31st, and very cold periods about the 13th to 16th and the 21st to the 23d, which gave a general average temperature somewhat below normal. On the 14th minimum temperatures were as low as 20° in parts of the northern section and 32° at St. Louis, which equaled the record for so early in the season, and on the 23d, in western and southwestern sections, extremely low readings were again reported, with 15° at Grant City and 17° at Seymour.

Drought conditions that prevailed in September in northern and central sections were not materially relieved in October, as the precipitation for October averaged less than 2.00 inches almost generally in those sections, and much of the area received less than 1.50 inches. Precipitation was also very light in most of the southwestern quarter of the State. The southeastern quarter received an average of 3.86 inches, with amounts totaling 5 to 6 inches in the lower southeastern counties and ranging downward to between 2 and 3 inches in the western and northern parts of that division.

Except in the Southeastern Division, good soaking rains were still needed at the close of the month, although fairly general light to moderate rains on the 17-19th had been helpful. Lack of moisture prevented normal growth of wheat and other grains and pastures, which continued unusually backward. Poor stands were reported in many localities and much reseeded was necessary. Some wheat acreage had not been sown on account of the hard ground. Farm water supplies were exhausted in places, requiring hauling of water. Corn was mostly in shock and some had been cribbed. A large apple crop had been harvested under favorable conditions.

River stages were very low all the month. Small streams were dry in many places. At St. Louis the lowest October stage of record occurred, with 2.8 feet below zero on the 6th and 7th, and the average for the month, 2.3 feet below zero, is the lowest October average (years 1861-1937).

## TEMPERATURE

The monthly mean temperature for the State, 80 stations reporting, was 55.3°, or 1.0° below normal. The highest monthly mean was 59.2° at Sikeston, and the lowest monthly mean was 53.0° at Unionville. The highest temperature recorded was 98° at Warsaw on the 5th, and the lowest was 15° at Grant City on the 23d. The greatest daily range was 57° at Lamar on the 24th and at Fulton on the 29th.

## PRECIPITATION

The average precipitation for the State, 139 stations reporting, was 2.44 inches, or 0.47 inch less than normal. The greatest local monthly amount was 7.12 inches at Caruthersville, and the least local monthly amount was 0.65 inch at Altona. The greatest amount in any twenty-four hours was 3.25 inches at Caruthersville on the 18th. The average number of days with 0.01 inch or more of precipitation was 7. There was only a trace of snow, recorded at a number of stations.

## MISCELLANEOUS PHENOMENA

Aurora.—7th.  
Earthquake.—5th.  
Fog.—Dense, 2d, 3d, 4th, 5th, 11th, 18th.  
Frost.—Light, 6th, 7th, 8th, 10th, 11th, 13th, 14th, 20th, 24th; heavy, 8th, 14th, 15th; killing, 13th, 14th, 15th, 18th, 23d, 24th.

(Continued on page 49)

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)				Wind				Relative humidity			
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12 noon	6:30 p. m.
Columbia.....	30.03	30.59	14	29.50	19	7.6	25	nw.	19	76	48	50
Kansas City.....	30.04	30.63	14	29.50	18	8.5	34	nw.	19	74	45	49
St. Joseph.....	30.04	30.64	14	29.51	18	8.1	32	nw.	19	72	46	50
St. Louis.....	30.03	30.55	14	29.36	19	11.1	33	w.	19	72	51	51
Springfield.....	30.04	30.53	14	29.52	18	9.1	31	w.	19	76	50	52
Cairo, Ill.....	30.04	30.47	15	29.49	19	8.6	28	w.	19	84	55	62
Keokuk, Iowa...	30.04	30.58	14	29.48	19	7.5	24	w.	19	74	48	51

## COMPARATIVE DATA FOR OCTOBER

Year	Temperature			Precipitation					Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy
1888.....	53.6	89	24	2.72	2.02	3.32	2.82		6	..	..	..
1889.....	53.8	91	22	2.32	2.54	2.95	2.38	...	...	...	...	...
1890.....	54.8	91	20	2.35	3.01	2.70	1.33	...	...	...	...	...
1891.....	55.7	92	20	1.05	1.31	1.09	0.76	...	...	...	...	...
1892.....	57.5	95	16	2.40	2.04	2.78	2.39	0	16	6	8	8
1893.....	56.7	95	16	1.12	0.48	0.91	1.97	...	...	...	...	...
1894.....	57.6	94	18	1.82	2.09	1.26	2.32	...	...	...	...	...
1895.....	51.2	89	14	0.42	0.26	0.34	0.66	T	...	...	...	...
1896.....	54.1	90	19	2.48	2.70	2.34	2.32	0	19	6	4	6
1897.....	62.5	99	23	0.74	0.55	0.81	0.87	0	3	22	6	3
1898.....	53.5	95	19	4.35	4.26	4.18	4.61	...	...	...	...	...
1899.....	62.4	100	24	3.16	1.98	3.58	3.93	1.4	8	11	7	13
1900.....	62.4	92	25	3.96	5.23	3.78	2.86	0	5	20	6	5
1901.....	60.1	96	24	1.69	1.55	1.63	1.89	0	6	18	7	7
1902.....	59.5	88	23	2.41	2.90	2.30	2.02	0	6	18	8	5
1903.....	57.3	90	19	3.06	2.19	3.76	3.22	0	5	21	5	5
1904.....	57.6	90	19	0.88	0.93	0.81	0.90	0	3	20	7	6
1905.....	55.1	90	20	4.85	3.67	5.78	5.09	0.3	10	15	7	9
1906.....	56.3	94	17	1.06	0.66	0.89	1.62	0	5	17	6	8
1907.....	56.7	94	18	2.93	2.02	3.62	3.14	0	5	17	6	8
1908.....	56.3	92	21	2.39	3.60	3.11	0.45	0.8	5	18	7	7
1909.....	57.2	96	20	2.72	3.45	2.99	1.71	T	...	...	...	...
1910.....	59.4	94	15	2.97	0.97	1.76	6.18	0	5	22	4	5
1911.....	56.9	96	25	3.16	3.81	3.31	2.36	0.2	8	11	7	13
1912.....	59.1	97	21	3.78	3.87	4.29	3.17	0.7	6	20	5	6
1913.....	54.7	98	11	4.65	3.68	3.92	6.36	3.3	9	15	6	10
1914.....	59.2	88	19	4.59	4.32	4.28	5.17	0	7	14	6	11
1915.....	59.3	95	22	1.22	0.77	1.61	1.29	0	3	23	5	3
1916.....	58.0	95	20	2.12	2.53	2.03	1.79	0.3	6	18	5	8
1917.....	49.8	93	12	1.15	1.25	0.77	1.43	0.2	6	16	8	7
1918.....	60.6	95	28	3.45	3.02	3.51	3.82	0	7	14	6	11
1919.....	58.4	98	17	7.07	3.49	8.48	9.23	0	11	10	7	14
1920.....	61.3	93	18	3.14	1.94	3.76	3.73	T	7	17	6	8
1921.....	57.9	92	24	2.15	2.78	2.20	1.47	0	5	21	5	5
1922.....	59.9	97	18	2.04	2.00	1.84	2.28	0	5	20	5	6
1923.....	53.0	89	17	3.55	2.40	4.40	3.84	0.1	9	15	5	11
1924.....	61.8	92	21	1.22	1.54	1.59	0.52	0	4	22	5	4
1925.....	48.6	92	- 3	4.98	3.70	4.12	7.12	2.4	10	8	8	15
1926.....	57.3	98	21	4.78	4.43	4.98	4.77	0	9	14	6	11
1927.....	60.9	98	26	4.59	5.49	5.33	2.96	0	5	22	5	4
1928.....	60.9	94	22	3.82	3.85	2.91	4.71	0	8	15	8	8
1929.....	57.2	91	23	5.36	6.30	5.97	3.80	T	10	15	6	10
1930.....	55.3	92	11	3.09	2.43	3.68	3.17	T	6	16	6	9
1931.....	61.7	95	27	3.37	3.89	3.99	2.23	0	8	15	7	9
1932.....	55.7	90	22	3.54	2.79	3.19	4.65	0	5	18	5	8
1933.....	56.4	86	23	2.90	1.68	3.78	3.25	0	7	17	8	6
1934.....	61.1	90	24	2.50	2.22	3.02	2.25	0	4	22	5	4
1935.....	57.1	90	21	3.47	2.04	4.42	3.94	T	10	12	7	12
1936.....	56.7	89	20	3.55	2.45	3.76	4.43	T	8	16	6	9
1937.....	56.3	98	15	2.44	1.57	1.89	3.86	T	7	16	6	9
Period.....	57.3	100	- 3	2.91	2.61	3.06	3.06	0.2	6	17	6	8



## Climatological Data for October 1937

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches			Number of days			Prevailing direction of wind	Observers			
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelted	With precip., .01 inch or more			Clear	Partly cloudy	Cloudy
Northern Division																				
Bethany	Harrison	916	42	55.1	+ 0.3	91	1	16	23	42	1.39	-1.53	0.70	0	5	22	2	7	nw.	A. S. Cumming
Brunswick	Chariton	652	56	55.0	- 0.3	92	5	23	23†	52	1.74	-1.26	0.72	0	7	17	2	12	se.	O. K. Benecke
Chillicothe	Livingston	779	28	55.0	0.0	91	1†	16	23	45	0.86	-2.28	0.40	0	6	21	5	5	e.	Wm. J. Olenhouse
Clifton Hill	Randolph	731	38	53.8	- 2.9	92	5	20	23	37	2.41	-0.11	1.44	0	7	17	3	11	nw.	Dr. A. J. Bradsher
Columbia	Boone	740	47	56.2	- 0.4	94	5	24	23	38	1.64	-0.97	0.49	0	8	12	8	11	n.	U. S. Weather Bureau
Conception	Nodaway	980	48	55.8	+ 0.4	92	2	19	23	37	1.58	-1.30	0.74	T	4	15	10	6	nw.	Fr. Adelhelm Hies
Downing	Schuyler	876	16	54.2	- 1.7	90	2†	19	23	40	1.83	-1.23	0.85	0	4	20	3	8	n.	Everett Rowe
Edgerton	Platte	856	17	56.4 <sup>a</sup>	+ 0.1	92	2	17	23	46	1.37	-1.25	0.77	0	5	23	3	5	s.	Fred L. Stiff
Elsberry	Lincoln	429	6	54.3	.....	89	1†	23	15	49	2.11	.....	1.06	0	5	13	9	9	n.	Ray E. Mills
Fayette	Howard	680	57	55.4	- 1.0	94	5	22	23	46	2.65	-0.24	1.43	0	6	15	7	9	s.	Harry P. Mason
Fulton	Callaway	818	49	55.8	- 1.6	94	5	22	23	57	2.19	-1.23	1.00	0	8	15	8	9	w.	Clyde C. Herring
Gorin	Scotland	700	50	.....	.....	.....	.....	.....	.....	.....	1.23	-1.75	0.62	T	4	20	2	9	se.	W. L. Harker
Grant City	Worth	1,134	33	54.5	- 0.6	90	29	15	23	43	1.30	-1.74	0.47	T	5	15	7	9	sw.	Howard Rybolt
Hannibal	Marion	759	45	55.7	- 0.3	91	5	26	14	35	1.11	-1.28	0.62	0	7	11	6	14	n.	Hannibal Water Dept.
Kansas City	Jackson	741	48	57.0	- 0.7	90	2	24	23	39	1.15	-1.77	0.55	T	8	14	8	9	sw.	U. S. Weather Bureau
Kansas City University	Jackson	908	0	57.8	.....	90	2	21	23	41	0.90	.....	0.27	0	6	18	5	8	sw.	University of Kansas City
Kidder	Caldwell	1,020	45	55.0	- 0.8	89	2	20	23	35	1.24	-1.83	0.71	0	4	16	9	6	se.	Roscoe L. Terry
King City	Gentry	1,095	11	.....	.....	.....	.....	.....	.....	.....	1.35	-1.55	0.62	0	5	10	15	6	nw.	John M. Martin
Kirkville	Adair	969	48	53.6 <sup>a</sup>	- 1.1	87	5†	18	23	42	1.45	-1.71	0.60	0	3	11 <sup>a</sup>	9 <sup>a</sup>	10 <sup>a</sup>	nw.	Charles Noble
Lawson	Ray	1,050	0	56.4	.....	89	5	21	23	36	1.18	.....	0.48	T	6	13	8	10	sw.	Elmer E. Lamb
Linneus	Linn	816	5	.....	.....	.....	.....	.....	.....	.....	1.25	.....	0.42	T	6	15	6	10	w.	H. D. Taggart
Louisiana	Pike	469	43	55.2	- 1.0	93	5	20	15	45	1.75	-1.53	1.10	0	4	15	4	12	n.	Stark Bros Nurseries
Macon	Macon	875	38	53.8	- 2.5	89	5	19	23	41	1.49	-1.40	0.57	0	7	18	4	9	ne.	W. C. Brown
Maryville	Nodaway	1,169	47	53.8	+ 0.3	88	1	20	23	40	1.21	-1.76	0.53	T	6	14	3	14	nw.	R. B. Montgomery
Mexico	Andraus	800	48	54.9	- 1.4	95	5	23	15	56	1.63	-1.44	0.64	0	7	21	0	10	w.	Mrs. Abbie Snoddy
Moberly	Randolph	875	0	53.8 <sup>b</sup>	.....	91	5	19	23	39	1.41	.....	0.58	0	3	16	5	10	sw.	Cornell Hospital
Oregon	Holt	1,048	81	55.4	+ 0.3	90	1	22	23	40	1.01	-1.74	0.41	T	5	21	7	3	ne.	Miss Mina Wright
St. Charles	St. Charles	520	49	56.2	- 2.0	94	1	28	15	49	2.92	-0.26	0.98	T	9	16	4	11	n.	U. S. Weather Bureau
St. Joseph	Buchanan	957	27	56.2	+ 0.2	89	1	24	23	33	1.26	-1.63	0.68	T	9	16	8	7	sw.	U. S. Weather Bureau
Steffenville	Lewis	650	39	54.8	- 2.6	91	5	23	14	41	1.96	-0.77	0.71	0	6	15	6	10	n.	Frank Hall
Tarkio	Atehison	916	34	53.4	- 1.4	87	29	23	14	45	2.09	-0.72	0.98	0	6	13	10	8	nw.	Albert Volker
Trenton	Grundy	822	41	55.6	- 0.3	91	1	19	23	41	1.01	-2.12	0.59	T	4	16	7	8	s.	W. H. Estes
Unionville	Putnam	1,062	44	53.0†	- 2.2	.....	.....	18	23	.....	1.70	-1.43	0.58	0	6	20	1	10	w.	John H. Schick
Warrenton	Warren	816	55	56.4	+ 0.4	91	5	27	14	36	2.39	-1.05	0.96	0	8	13	8	10	nw.	Prof. A. W. Ehling
Keokuk, Iowa	Lee, Ia.	574	66	54.0	- 1.4	89	5	27	14	36	1.08	-1.18	0.77	T	5	13	6	12	sw.	U. S. Weather Bureau
Division means and extremes				55.1	- 0.9	95	5	15	23	57	1.57	-1.04	1.52	T	6	16	6	9	nw.	
Southwestern Division																				
Appleton City	St. Clair	853	42	56.3	- 2.6	93	5	18	23	49	1.31	-1.65	0.62	0	6	19	5	7	sw.	Rolla Brown
Bolivar	Polk	1,071	43	58.4 <sup>a</sup>	- 0.2	94	5	19	23	40	1.19	-2.06	0.42	0	7	14	12	5	w.	Southwest Baptist College
Boonville	Cooper	650	61	.....	.....	.....	.....	23	23	37	1.97	-1.25	0.86	0	8	.....	.....	.....	.....	J. V. Suddath
Clinton	Henry	765	44	57.0	- 1.9	94	5	19	23	45	1.27	-2.18	0.60	0	6	.....	.....	.....	.....	U. S. Weather Bureau
Dean	McDonald	1,000	33	57.4	- 1.3	90	6	17	23	52	1.86	-2.03	0.88	0	6	20	4	7	w.	E. S. Taylor
Eldon	Miller	934	42	56.0	- 1.4	94	5	22	23†	50	2.42	-1.28	0.68	0	7	15	8	8	n.	E. H. Shepherd
Garber	Taney	950	2	57.5	.....	93	5†	19	23	55	3.10	.....	1.01	0	6	7	9	15	e.	William H. Durham
Harrisonville	Cass	904	59	54.7	- 1.4	90	5	18	23	50	1.24	-1.73	0.46	0	5	12	5	14	sw.	John H. Patterson
Jefferson City	Cole	557	47	54.5	- 2.3	93	5	21	23	45	2.59	-0.78	0.84	0	9	17	11	3	e.	Mrs. Frank Kliegel
Lakeside	Miller	595	6	56.6	.....	95	5	25	23	53	1.78	.....	0.77	0	9	.....	.....	.....	.....	W. S. Frame
Lamar	Barton	980	49	57.6	- 1.3	95	5	19	23†	57	2.37	-1.24	1.20	0	5	16	7	8	sw.	Jesse A. Mann
Lebanon	Laclede	1,265	49	57.2	- 0.5	94	5	17	23	41	1.93	-1.84	0.95	0	10	16	3	12	ne.	Mrs. Rosa E. Montelius
Lexington	Lafayette	688	52	56.2	- 1.3	92	5	23	23	49	0.84	-2.19	0.41	0	6	16	10	5	sw.	Miss Carrie Loomis
Lockwood	Dade	1,078	31	59.0	+ 0.3	91	5	22	23	33	1.64	-2.26	0.65	0	7	16	11	4	sw.	Hubert A. Nieman
Marshall	Saline	779	50	57.6	+ 1.0	92	5	22	23	39	1.53	-1.69	0.73	0	6	16	11	4	uw.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	36	57.0	- 0.6	91	30	20	23	41	2.51	-0.95	0.76	0	8	14	10	7	sw.	Mo. Fruit Exp. Sta.
Mount Vernon	Lawrence	1,174	38	57.0	- 1.6	90	30	20	23	48	2.24	-1.14	0.90	0	5	19	0	12	sw.	G. H. Boswell
Neosho	Newton	1,011	50	58.5	- 0.7	91	30	19	23	54	1.91	-1.78	0.79	0	5	18	9	4	sw.	U. S. Fisheries Sta.
Nevada	Nevada	862	44	58.4	+ 0.8	93	5	20	23	41	2.04	-1.03	0.92	0	6	17	8	6	sw.	T. J. Kaupp
Sedalia	Pettis	910	17	58.2	+ 0.5	94	5	20	23	41	2.48	-0.20	0.93	0	8	17	11	3	s.	Mrs. Laura S. Trader
Seligman	Barry	1,542	36	57.6 <sup>b</sup>	- 1.4	87	30	19	23	37	1.69	-1.77	0.73	0	3	20 <sup>b</sup>	3 <sup>b</sup>	6 <sup>b</sup>	w.	Floyd E. Fawver
Seymour (near)	Webster	1,642	31	56.0	- 1.4	88	5	17	23	42	4.01	+0.53	2.50	0	7	17	8	6	se.	A. L. Hailey
Springfield	Greene	1,301	49	57.6	- 0.6	90	5	24	23	34	1.75	-1.30	0.72	0	8	15	5	11	s.	U. S. Weather Bureau
Versailles	Morgan	1,037	11	57.8	+ 0.2	96	5	18	23	45	2.57	-0.83	0.90	0	7	15	4	12	nw.	I. M. Wilson
Warrensburg	Johnson	878	50	57.3	- 0.7	94	5	20	23	41	2.23	-0.79	0.72	T	7	17	6	8	sw.	E. A. Markey
Warsaw	Benton	687	36	58.4	- 0.6	98	5	19	23	48	2.14	-1.66	1.37	0	7	17	0	14	sw.	Everett Martin
Division means and extremes				57.2	- 0.8	98	5	17	23	57	1.89	-1.17	2.50	T	7	16	7	8	sw.	
Southeastern Division																				
Advance	Stoddard	355	0	57.2	.....	89	5	25	24	46	5.02	.....	2.47	0	7	.....	.....	.....	.....	U. S. Weather Bureau
Arcadia	Iron	926	56	55.2	- 0.8	88	5	23	24	56	4.92	+1.47	1.63	0	9	14	10	7	n.	Arcadia College
Birch Tree (near)	Shannon																			



Daily Precipitation for October 1937

Stations	Drainage-basins	Day of month																															Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Northern Division																																		
Amity	Grand				.02					.32				.02		T.		.25	.04	.89	.05													1.59
Bethany	do								T.	.29				.04				.36	.32	.70									T.					1.39
Bowling Green	Mississippi			T.	.25					.20									.32	.60	.04													1.41
Brunswick	Grand			.07	.72					.22								.22	.07	.40	.04								T.					1.74
Canton	Mississippi			.02	.85					.04								.02	.24	.56	.10		.04											1.87
Chillicothe	Grand				.02					.23								.19	.01	.40	.01													0.86
Clinton Hill	Chariton			1.44					.05	.15				.02				.02	.07		.66													2.41
Columbia	Missouri			.48					.17	.05				.04	.13			.28	.08	.41			T.					T.	T.					1.61
Conception	do			T.					.13	.36								.35	.74														1.58	
Downing	Mississippi	.15		.85						.18				T.				.40	.43				T.					T.						1.83
Edgerton	Missouri			T.	T.													.19	T.	.77													1.37	
Edina	Mississippi			T.	.25					.15							.15	T.	.12	.58				T.									0.95	
Elsberry	do			1.06						.15								.27	.14	.49													2.11	
Farber	do			.19	.69					.20								.08	.28	.36	.17												1.97	
Fayette	Missouri			1.43					T.	.18								.17	.67														2.65	
Fulton	do			.25	.13					.25					.30			.16	.09	1.00													2.19	
Gallatin	Grand																	.39	.67														1.06	
Gloria	Mississippi			.19						.10				T.				.32	.02	.47														1.23
Grant City	Grand			T.					T.	.37				T.				.32	.02	.47			T.											1.30
Hannibal	Mississippi			.26	.01					.07				T.				.13	.01	.62	T.			T.										1.11
Hermann	Missouri			.10	.22					.25								.02	.36	.86	.04													2.06
Kahoka	Mississippi			.35						T.								.87	1.52															2.74
Kansas City	Missouri			T.					.28	.08				.03	.02			.12	.06	.38	.18													1.15
Kansas City University	do								.15	.27								.05	.18	.24	T.													0.90
Kidder	Grand				T.				T.	.25					.01				.27	T.	.71	.01												1.24
King City	Missouri			T.						.33								.33	.02	.62	.05													1.35
Kirkville	Mississippi			.60															.33	.02	.62	.05												1.45
La Belle	do				.34														.33	.52														1.53
Lawson	Missouri			T.					.11	.26								.56	.58	.05														1.18
Linneus	Grand				.42					.13								.31	.32	.03														1.25
Louisiana	Mississippi			.45										.04					.31	.32	.03													1.75
Lucerne	Grand				.06					.11								.37	.11	.66	.06													1.51
Macon	Chariton			.06	.57					.08				.14				.25	.03	.48	.02													1.49
Madison	Mississippi			.16	.35					.10								.08	.26	.55														1.50
Maryville	Missouri								.26	.27				T.	T.			.01	.14	.13	.40													1.21
Memphis	Mississippi			T.	.20					.11								.04	.22	.48	.05		.01											1.14
Mexico	do			.32	.32					.22				.03				.03	.15	.56														1.63
Milan	Grand				.46					.08								.38	.05	.42														1.39
Moberly	Mississippi			.48														.35	.58															1.41
Monroe City	do			.84	.03													.38	.55															1.80
New London	do				.95					.12								.09	.53															1.70
Oregon	Missouri	.06							.10	.24				T.				.20	T.	.41														1.01
Palmyra	Mississippi				.41														.17	.52	.15													1.25
Paris	do			.12	.24					.15									.61	.48	.07													1.67
Perry	do				1.03				.05										.18	.51														1.77
Philadelphia	do				.70														.18	.22														1.10
St. Charles	Missouri			.02	.15	.82				.12				.20					.18	.22														2.92
St. Joseph	do				.20				.25	.04				.01			.01	.14	.12	.67	.01	.05		T.	T.									1.26
Shelbina	Mississippi			.02	.20					.05									.48	.41	.05													1.25
Shelbyville	do				.25														.52	.60														1.37
Stellenville	do			.38						.10									.71	.05	.65													1.96
Tarkio	Missouri								.32	.28								.15	.15	.98														2.09
Trenton	Grand			T.					T.	.15								.07	.20	.59														1.01
Troy	Mississippi			.07	.88					.11				.21				.30	.55	.03														2.15
Unionville	Chariton				.43					.21				.08				.22	.18	.58														1.70
Warrenton	Mississippi			.02	.41					.24				.33				.20	.18	.96														2.39
Keokuk, Ia.	do			.14					T.	.03								.13	.01	.77														1.08
Southeastern Division																																		
Altona	Osage									.32								.11	.22															0.65
Appleton City	do				.03					.05	.28			.05				.28	.62															1.31
Bolivar	do			T.	.17					.07	.26							.14	.04	.42	.09													



## Daily Precipitation for October 1937—Continued from preceding page

Stations	Drainage-basins	Day of month																															Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Southeastern Div.—Continued																																	
Birch Tree (near).....	Black			.42	1.22														.63	.43	.54												3.24
Bragg City   .....	St. Francis		T.	1.67	.27					T.									.26	2.40	.20	T.		T.									4.80
Campbell.....	do		1.05	.15															1.80	.63	.29		.10							.09			4.11
Cape Girardeau	Mississippi			.43	.27						.10	.03			T.				.08	2.42	.69	.11							T.		.07		4.19
Caruthersville	do			2.70	.30	.15													.19	3.25	.30	.06		.10									7.12
Centerville	Black				.83	.38					.14			.10	T.				1.05	.50													3.60
Crystal City	Mississippi			..	.85	.53					.08			.12				..	1.05	.97	T.		T.							.18			3.78
Cuba	Meramec										.37			.50					.62	.50													1.59
Dexter	St. Francis			1.60	.70						T.			T.					.23	2.70	.40	.21							T.	T.			5.84
Doniphan	Black		.30	.89	.78						.18			T.					1.37	.44	.74		.04										4.74
Farmington	St. Francis				.25	2.39					.25			.14					.41	.69	.60			T.							.05		4.78
Fisk	do		.08	.74	.61	T.												T.	2.53	T.		T.	.07							.06			4.69
Fredericktown	do			T.	1.41	1.70					.20					.16			.06	1.30	.80	.04	T.										5.67
Goodland	Black				.05	.80					.28								.25	.45	1.00												2.83
Greenville	St. Francis		.19	.58	.97									T.					1.02	.50	.98												4.24
Jackson	Mississippi		.40	.75	.29						.08								1.37	1.12	.70										.05		4.76
Jerome	Gasconade				.61						.23					.11				.40	T.												1.35
Koshkonong	Black				.60	.85													1.07		.90												3.42
Leeper	do				.18	.63	.90												.02	1.41	.67	.08								.15			4.04
Licking (near)	Gasconade				.03	.68													.51	1.14	.76												2.12
Marble Hill.	Mississippi		.30	.85	.50						.10			.05					1.10	.85	.50												4.25
Meramec Park	Meramec				.02	.90					.21				.20					.42	.64												2.89
Morehouse	Mississippi		.67	2.02	.13						.08								1.57	1.09	.24		T.							T.			5.80
New Madrid	do			1.70	.43	.06					.14	.01				.02			.35	2.43	.09	.04		.13						.01			5.41
Owensville	Gasconade					.30	T.				.32				.36				.05	.22	.48	T.											1.73
Parma	St. Francis		T.	1.73	.70	.10					.09								.15	2.50	.25	T.											5.43
Poplar Bluff	Black			1.02	.28	.04					.09					.25			.40	1.85	.78									.10	.12		4.68
Richwoods	Meramec				.15	.61			.02		.09			.14					.37	.12	.43	1.00											2.65
Rolla	do			.03	.58					T.	.14			.14					.47	.36	.72	T.	T.	T.	T.	T.	T.	T.			.08		3.51
St. Louis***	Mississippi			.36	.77		T.				.09	.11		.23					.43	.27	.86	T.	T.	T.	T.	T.	T.	T.					3.29
St. Louis Airport*	Missouri				.16	1.23					.15	.05		T.					.47	.36	.72	T.	T.	T.	T.	T.	T.						3.55
St. Louis University*	Mississippi			.31	1.30						.01			T.	.19				.60	.25	.69	.01	T.	T.	T.	T.	T.			.01			3.55
Salem	Meramec			.06	.25						.20			.11					.23	.21	1.03												2.12
Sikeston	Mississippi			1.50	.68	.08					.05				.03				T.	2.90	.15	.05		.02									5.46
Union	Meramec			.03	.92						.25			.30					.30	.15	.53										.12		2.60
Valley Park	do			.09	.15	.70					.23	T.		.25	T.				.63	1.13	T.	T.			T.					T.	T.		3.18
Van Buren	Black			..	1.64														1.02	.12	.43												3.21
West Plains	do			.42	.44						.36								.60	.52	.66		T.										3.00
Williamsville	do			.62	.82	1.55					.06	.02				.03			.12	1.46	.64	.08		.03							.08		5.51
Willow Sprgs. (near)	White			.07	.50	.11					.24								.30	.98	.68								.02	.02			2.92
Zalma	Mississippi			.97	.52										T.				2.09	.76				.01	T.								4.34
Cairo, Ill.***	do		.79	.41	.01					T.									2.38	.63	.06												4.47

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. †† Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. T. Trace, or less than 0.01 inch.  
 \*\*\* Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. \*\* Precipitation in the next following measurement; separate dates of fall not recorded. \* Precipitation is for 24-hour period, midnight to midnight. † Estimated. ‡ Partially estimated. ††† Incomplete.

**Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for October 1937**  
 (See precipitation data in table on preceding page)

Station	Data	Day of month																															Monthly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Lakeside (Osage Dam)	Evaporation .....	.258	.183	.221	.021	.030	.297	.271	.183	.034	.062	.118	.138	.101	.091	.119	.092	.091	†††	.163	.156	.176	.138	.075	.076	.264	.169	.195	.120	.103	.157	.196	4.293
	Mean temperature ..	70	70	62	68	76	68	56	52	53	57	60	60	50	40	44	52	53	64	53	58	51	38	38	50	58	56	52	54	60	64	66	56.6
	Wind movement ..	65	36	59	54	32	68	66	60	62	52	53	56	69	64	69	74	106	64	98	158	99	107	123	70	75	79	104	54	33	54	70	2,233

Observations taken at 7.30 a. m. Wind movement corrected to true velocities. For description see April 1932 report.  
 \*\*\*\* Evaporation included in next measurement. ††† — .005.

*Continued from page 46*

**NEW STATIONS ESTABLISHED**

Hail.—Moderate, 19th at Columbia.  
 Halos.—Solar, 2d, 8th, 10th, 11th, 12th, 15th; lunar, 11th, 12th, 15th, 16th, 17th.  
 Sleet.—15th, 21st.  
 Smoke.—Dense, 2d, 8th, 10th, 24th, 27th, 28th, 29th.  
 Thunderstorms.—Local, 4th, 8th, 9th, 12th, 26th, 27th; more or less general, 18th, 19th.  
 Windstorms.—High winds on 18th, 19th, 26th, 27th, but no damage reported.

Cooperative climatological stations were recently established, as follows: Mount Vernon, Lawrence County, September 30, with Mr. G. H. Boswell, horticulturist and apple grower, in charge; Bolivar, Polk County, October 1, with Dr. Vernon S. Gentry, of Southwest Baptist College, in charge; Boonville, Cooper County, October 12, with Mr. J. V. Suddath, Superintendent of the Boonville Water Department, in charge; University of Kansas City, October 1, with Mr. Burton Lovan, of the University, in charge.



## Daily Temperatures for October 1937

Stations	Day of month																															Mean
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Northern Division																																
Bethany.....	Maximum... 91	90	81	77	86	73	70	61	62	75	83	70	49	40	47	52	62	74	62	67	52	40	55	70	73	67	69	76	89	78	67	68.0
Bethany.....	Minimum... 60	52	53	62	62	44	38	33	44	42	44	44	37	22	35	42	47	56	42	43	36	32	16	31	45	39	33	34	48	48	45	42.2
Brunswick §§.....	Maximum... 88	91	75	70	92	66	68	60	59	74	78	66	54	49	46	57	60	75	62	64	49	38	47	68	74	68	64	76	88	79	74	67.1
Brunswick §§.....	Minimum... 57	55	56	59	62	52	43	40	42	46	46	49	39	27	27	39	43	51	45	41	41	33	23	23	39	45	41	36	36	48	48	42.9
Chillicothe §§.....	Maximum... 91	91	79	71	91	76	71	61	59	75	81	66	57	48	46	54	61	78	64	68	48	42	51	69	71	69	69	77	91	76	72	68.5
Chillicothe §§.....	Minimum... 59	51	53	63	62	45	39	36	42	44	45	48	35	23	31	39	44	51	42	42	33	32	16	24	43	41	34	35	46	48	45	41.6
Clifton Hill.....	Maximum... 87	78	76	70	92	80	64	59	60	70	68	68	50	48	45	54	58	73	65	57	57	41	40	67	63	63	58	66	77	76	65	64.4
Clifton Hill.....	Minimum... 57	59	56	61	62	49	42	38	46	44	39	49	37	24	30	40	51	55	43	41	39	32	20	30	41	39	35	34	48	49	47	43.1
Columbia.....	Maximum... 88	87	69	74	94	70	67	64	62	70	75	68	53	47	48	58	59	72	61	65	53	38	45	68	76	67	62	72	86	79	73	66.8
Columbia.....	Minimum... 59	59	60	59	65	54	43	41	47	46	50	47	40	29	37	42	53	57	45	45	38	31	24	32	46	45	36	34	48	50	51	45.6
Conception.....	Maximum... 90	92	85	77	82	74	69	63	62	75	79	73	53	46	45	42	65	71	56	63	55	45	53	69	71	67	67	77	87	76	71	67.7
Conception.....	Minimum... 67	68	62	62	57	43	49	47	46	46	46	45	36	23	34	31	40	42	40	40	40	28	19	37	45	40	40	40	53	52	45	44.0
Downing.....	Maximum... 89	86	74	71	89	82	67	62	61	72	76	69	54	47	50	56	56	67	59	66	61	41	54	65	76	67	62	70	86	75	71	67.1
Downing.....	Minimum... 59	50	54	61	50	44	39	33	46	44	46	45	32	21	27	40	53	43	41	34	31	19	29	39	41	34	36	50	50	50	41	41.0
Edgerton.....	Maximum... 90	92	80	78	91	73	71	60	63	73	79	68	55	49	46	54	68	75	62	64	55	...	53	73	71	70	69	77	87	79	75	70.0
Edgerton.....	Minimum... 60	52	52	62	64	47	34	34	47	41	47	49	38	25	39	40	51	51	41	40	41	...	17	27	42	42	28	37	47	42	50	42.9
Elsberry.....	Maximum... 89	86	74	71	89	82	67	62	61	72	76	69	54	47	50	56	56	67	59	66	61	41	54	65	76	67	62	70	86	75	71	67.1
Elsberry.....	Minimum... 50	50	55	63	63	55	40	33	46	39	46	47	41	27	23	41	44	53	45	45	39	34	29	26	30	43	30	25	37	41	45	41.5
Fayette.....	Maximum... 89	88	75	74	94	74	68	65	63	72	77	67	52	47	46	58	59	71	63	67	57	42	49	69	76	67	64	74	88	72	71	67.8
Fayette.....	Minimum... 50	50	58	62	59	54	40	37	46	40	45	49	40	27	31	41	51	56	44	42	42	32	22	24	37	46	39	29	42	48	49	43.0
Fulton §§.....	Maximum... 90	87	68	76	94	71	70	65	64	71	77	71	55	47	48	59	59	73	61	67	51	40	48	70	78	68	66	72	87	80	72	67.9
Fulton §§.....	Minimum... 51	53	60	62	63	58	45	37	47	44	50	53	42	30	31	38	47	53	45	45	44	32	22	27	37	46	39	30	30	45	50	43.7
Grant City.....	Maximum... 89	88	83	76	84	62	69	58	64	74	80	64	52	48	43	48	66	73	57	65	52	49	53	69	73	68	67	76	90	74	70	67.2
Grant City.....	Minimum... 59	59	56	62	59	40	37	36	46	41	40	43	37	23	35	40	47	47	41	39	33	35	15	31	40	34	29	38	47	51	46	41.8
Hannibal.....	Maximum... 88	84	76	69	91	83	65	60	60	72	77	67	51	47	48	56	58	67	60	68	58	41	43	63	73	65	62	72	86	75	70	66.3
Hannibal.....	Minimum... 60	50	58	62	63	52	43	38	45	46	50	48	39	26	30	43	46	55	45	46	36	34	30	27	30	40	43	37	51	55	47	45.1
Kansas City.....	Maximum... 89	90	72	80	88	68	70	60	62	73	79	65	53	49	49	58	67	74	59	65	52	41	54	73	72	70	68	77	88	79	78	68.5
Kansas City.....	Minimum... 65	54	57	63	63	50	43	41	48	49	51	45	38	29	40	42	54	46	44	44	39	29	24	34	47	47	39	39	54	46	50	45.6
Kansas City Univ. ....	Maximum... 89	90	81	79	88	82	70	65	61	72	78	69	53	50	50	57	66	74	66	67	59	44	50	73	72	70	66	78	89	79	78	69.8
Kansas City Univ. ....	Minimum... 63	54	56	63	62	52	43	40	48	45	48	52	40	29	39	41	53	52	42	43	44	31	21	33	46	47	39	37	51	47	52	45.8
Kidder.....	Maximum... 87	89	78	74	86	75	68	57	59	72	78	66	52	45	44	51	62	73	67	62	53	42	50	69	70	66	64	75	86	75	71	66.6
Kidder.....	Minimum... 57	55	54	61	61	45	42	40	45	44	47	48	35	23	34	42	49	50	41	38	31	20	34	46	41	35	40	51	52	46	43.5	
Kirksville.....	Maximum... 86	...	78	70	87	70	65	67	58	72	77	71	52	48	44	55	58	71	64	65	55	40	45	62	69	67	64	72	87	75	69	65.4
Kirksville.....	Minimum... 59	...	54	62	65	47	41	35	46	43	44	48	35	24	29	42	47	47	42	42	34	30	18	24	37	40	36	30	50	53	42	41.8
Lawson.....	Maximum... 88	88	77	78	89	75	71	58	61	71	77	70	55	48	45	54	62	74	65	62	55	42	54	72	71	68	67	77	87	78	75	68.2
Lawson.....	Minimum... 59	59	53	62	64	46	44	43	47	45	49	50	36	24	36	40	50	52	40	41	39	29	21	36	48	42	35	42	51	54	49	44.7
Louisiana.....	Maximum... 92	85	70	72	93	75	64	70	60	70	75	65	58	50	50	60	60	70	60	63	65	50	40	64	74	70	67	70	85	77	80	67.9
Louisiana.....	Minimum... 54	64	57	62	62	50	40	30	45	42	50	49	40	27	20	45	55	45	43	38	34	30	27	30	40	33	26	40	45	46	42.4	
Macon §§.....	Maximum... 86	88	78	72	89	65	68	63	60	70	77	63	53	47	45	55	59	72	59	66	50	37	45	66	75	66	63	73	86	75	72	65.9
Macon §§.....	Minimum... 60	53	54	58	61	41	42	38	42	44	47	51	34	24	28	36	43	52	42	40	35	29	19	25	40	40	35	39	46	52	42	41.7
Maryville.....	Maximum... 88	86	80	72	82	66	68	58	59	73	79	62	51	44	43	46	64	73	56	63	53	40	53	67	71	66	65	75	85	74	70	65.5
Maryville.....	Minimum... 58	57	57	61	59	42	40	41	4																							



Stations	Day of month																																		Mean
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
<i>Southwestern Division—Concluded</i>																																			
Neosho.....	87	85	82	76	89	88	80	71	64	69	73	71	62	55	59	71	68	75	71	71	69	52	71	80	78	68	80	86	91	86	73.0				
.....	Maximum...																																		
.....	Minimum...	49	46	54	65	61	55	48	40	51	37	37	47	46	32	33	45	57	57	41	38	45	34	19	34	44	32	33	32	44	45	43.4			
Nevada.....	89	87	81	80	93	80	72	70	64	71	75	73	63	50	57	68	64	74	64	71	63	45	54	73	50	44	35	41	46	50	49	44.4			
.....	Maximum...	50	51	55	62	63	55	41	42	47	43	42	52	40	29	36	45	54	58	40	40	42	32	20	33	77	68	67	77	82	79	70.4			
.....	Minimum...	58	57	77	72	94	90	70	64	61	72	76	73	63	52	50	59	60	76	73	67	58	45	51	73	77	68	67	77	82	83	79	74.4		
Sedalia.....	88	59	58	62	64	53	42	45	45	43	46	52	39	29	35	41	54	56	43	42	42	32	20	32	47	43	55	40	48	50	46	46.0			
.....	Maximum...	80	79	73	74	85	86	78	67	60	64	69	68	58	48	53	67	73	67	68	63	45	48	76	70	62	75	85	87	83	82	89.3			
.....	Minimum...	63	55	58	58	61	61	56	48	48	39	48	48	45	32	31	40	47	40	38	44	32	19	44	52	38	48	45	53	52	45	45.9			
Seligman.....	85	84	84	83	88	86	77	67	59	64	70	65	64	49	54	63	61	69	68	67	63	50	45	66	70	77	68	73	83	86	83	69.8			
.....	Maximum...	52	53	52	51	50	57	50	38	46	37	38	44	41	30	30	39	54	46	48	45	31	17	26	42	42	33	20	42	49	50	42.3			
.....	Minimum...	84	81	70	74	90	86	67	65	56	64	70	65	51	47	52	64	58	71	59	68	56	40	47	67	77	66	64	74	84	88	61	67.3		
Seymour(near).....	60	62	59	63	64	58	50	49	49	46	47	51	40	32	35	42	52	55	43	44	40	28	24	40	51	48	41	45	50	57	70	47.9			
.....	Maximum...	95	87	78	78	96	82	70	64	63	74	80	70	63	46	49	62	59	76	66	67	60	44	48	71	78	68	66	81						

\* , b , c , etc., indicate respectively 1, 2, 3, etc., days missing from the record. §§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs. ¶ Estimated.



05  
75

JUN 29 1942  
UNIVERSITY OF ILLINOIS

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

# CLIMATOLOGICAL DATA

19

## MISSOURI SECTION

ROSCOE NUNN  
ST. LOUIS, MO.

VOL. XLI NOVEMBER 1937 No. 11

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR

### GENERAL SUMMARY

November weather was marked by some very unusual features. The first day of the month had maximum temperatures well up in the eighties at most stations, and at one, Mountain Grove, in the south-central portion, 90° occurred, breaking the State record for high temperature in November, the highest previously recorded being 89° in 1914 and 1927. From the 16th to the 23d, inclusive, real winter prevailed. It was one of the coldest spells of record for so early in the season, and temperatures around zero occurred pretty generally the mornings of the 21st and 22d in northern and western sections, and as low as 4° above zero in the southeast. Several stations in the Northern Division recorded sub-zero temperatures. During the last week of the month temperatures fluctuated sharply, with unusual warmth on the 25th and 26th and unusual coldness on the 28th and 30th.

Another marked feature was the heavy snowfall about the 15th to 18th in central and western parts of the State. The average monthly snowfall for the State was 4.1 inches, which has been exceeded only four times in November records. The rainfall of the month was light, decidedly less than normal at most stations. The total precipitation, including snow and rain, was considerably less than normal in all three divisions. This is the fourth successive month having material deficiency in precipitation in the northern and western sections, and the subsoil is unusually dry in those sections. In the southeastern counties moisture conditions are generally satisfactory.

Wheat and other winter crops made but little growth. The plants were unusually small at the end of November, and in many localities stands of wheat were not satisfactory. Very little pasturing of wheat was done. Creeks, ponds, and springs were dry in many parts of the west-central and northwestern sections, and stock water was scarce. Livestock generally were doing well except for inconveniences of watering. The supply of rough feed was good.

River stages continued very low. Small streams were dry in many places. At St. Louis the lowest November stage of record occurred, with 2.9 feet below zero on the 30th, and the average stage for the month, 1.5 feet below zero, is the lowest November average (years 1861-1937). The previous lowest average November stage at St. Louis was 0.7 foot below zero in 1933. Ice appeared unusually early in the rivers. The first floating ice at St. Louis was observed on the 23d.

### TEMPERATURE

The monthly mean temperature for the State, 82 stations reporting, was 41.0°, or 3.3° below normal. The highest monthly mean was 47.4° at Campbell, and the lowest monthly mean was 36.2° at Harrisonville. The highest temperature recorded was 90° at Mountain Grove on the 1st, and the lowest was 7° below zero at Grant City on the 21st. The greatest daily range was 55° at Crystal City on the 6th.

### PRECIPITATION

The average precipitation for the State, 140 stations reporting, was 1.85 inches, or 0.79 inch less than normal. The greatest local monthly amount was 3.19 inches at Bragg City, and the

least local monthly amount was 0.62 inch at Tarkio. The greatest amount in any twenty-four hours was 1.45 inches at Leeper on the 28th. The average number of days with 0.01 inch or more of precipitation was 7. Snowfall averaged 4.1 inches, or 3.1 inches more than normal. The greatest monthly snowfall was 11.5 inches at Mountain Grove.

(Continued on page 55)

### PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind				Relative humidity		
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12 noon	6:30 p. m.
Columbia.....	30.14	30.75	22	29.56	8	8.5	25	nw.	8	75	55	58
Kansas City.....	30.15	30.73	22	29.52	8	9.9	36	w.	13	72	55	58
St. Joseph.....	30.15	30.73	22	29.48	8	9.2	32	w.	13	73	54	57
St. Louis.....	30.14	30.73	22	29.64	13	12.4	35	sw.	7	69	52	54
Springfield.....	30.14	30.68	22	29.66	12	10.5	27	w.	13	73	52	55
Cairo, Ill.....	30.16	30.71	22	29.61	28	9.0	25	n.	28	77	55	59
Keokuk, Iowa..	30.14	30.76	22	29.51	8	8.8	30	nw.	13	70	48	56

### COMPARATIVE DATA FOR NOVEMBER

Year	Temperature			Precipitation						Number of days		
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, State	Average for State	Precip. .01 in. or more	Clear	Partly cloudy
1888.....	41.6	87	15	3.39	2.57	2.95	4.64	....	7	7	..	..
1889.....	39.9	76	6	3.52	3.16	3.12	4.29	0.6	7	..	..	..
1890.....	46.5	80	14	2.38	1.96	2.48	2.70	T.	5	..	..	..
1891.....	39.6	82	-7	4.14	2.67	3.24	6.51	....	7	..	..	..
1892.....	40.1	79	-9	2.75	2.17	2.14	3.95	1.0	6	11	7	12
1893.....	40.9	79	-1	1.70	1.32	1.60	2.17	0.3	4	14	9	7
1894.....	41.0	80	-3	1.56	1.59	1.71	1.39	T.	4	15	9	6
1895.....	41.6	82	-4	3.60	2.62	3.42	4.76	3.2	8	10	7	13
1896.....	42.3	82	-5	2.43	1.47	2.30	3.53	0.2	6	11	7	12
1897.....	43.4	82	-3	2.63	1.92	2.02	3.96	T.	6	13	8	9
1898.....	39.9	79	-8	2.32	2.03	2.43	2.50	2.3	6	14	8	8
1899.....	49.5	82	16	2.02	1.38	2.00	2.67	0.2	7	11	9	10
1900.....	43.7	84	7	2.99	1.52	2.71	4.75	0.2	6	15	7	8
1901.....	43.6	84	9	1.48	0.99	1.63	1.82	0.3	4	17	7	6
1902.....	50.1	85	18	3.73	3.05	3.64	4.51	0.4	9	8	9	13
1903.....	40.9	79	2	1.27	1.24	1.09	1.48	1.1	5	13	8	9
1904.....	46.3	83	11	0.22	0.18	0.24	0.24	T.	2	21	5	4
1905.....	45.8	83	2	1.87	2.36	1.35	1.89	T.	6	18	6	6
1906.....	42.5	88	-3	3.56	2.55	2.68	5.44	5.0	8	12	6	12
1907.....	43.8	88	11	2.24	1.39	1.91	3.43	T.	4	19	4	7
1908.....	47.6	87	9	3.90	2.70	4.67	4.33	0.2	8	15	7	8
1909.....	53.6	87	11	4.32	3.92	4.98	4.05	0.4	8	12	7	11
1910.....	42.0	83	11	0.35	0.31	0.22	0.52	0.1	3	15	8	7
1911.....	39.1	83	-3	2.63	2.07	2.78	3.04	1.1	7	13	6	11
1912.....	45.9	85	12	1.50	1.46	1.31	1.73	0.1	3	20	5	5
1913.....	51.7	80	11	2.71	2.61	2.69	2.83	T.	7	10	8	12
1914.....	48.6	89	2	0.69	0.36	0.64	1.05	0.1	3	19	6	5
1915.....	49.5	87	12	2.83	2.30	2.78	3.42	0.1	5	16	7	7
1916.....	46.9	85	3	2.46	2.25	2.63	2.51	0.1	4	19	4	7
1917.....	46.1	80	8	1.23	0.10	1.61	1.98	T.	3	14	5	11
1918.....	44.9	85	12	3.26	2.85	4.14	2.78	1.2	6	15	4	11
1919.....	32.2	78	2	3.57	3.06	3.19	4.45	1.0	6	15	5	10
1920.....	40.9	82	6	1.06	1.64	0.82	0.73	T.	6	12	6	12
1921.....	45.6	84	10	3.11	0.89	1.59	6.85	0.4	5	13	7	10
1922.....	47.8	84	15	3.68	3.70	3.97	3.38	T.	7	16	6	8
1923.....	45.1	79	14	2.25	1.39	2.79	2.57	3.0	6	15	6	9
1924.....	46.7	88	4	1.78	1.16	2.08	2.09	0.5	4	15	8	7
1925.....	42.8	80	-2	3.05	1.74	2.78	4.63	2.0	6	16	6	8
1926.....	39.6	78	0	3.01	2.13	2.86	4.04	4.3	7	11	7	12
1927.....	46.8	89	12	3.66	2.07	3.78	5.13	0.9	7	6	9	15
1928.....	44.6	79	-9	5.02	5.91	4.88	4.26	0.5	10	13	4	13
1929.....	39.0	78	-8	1.46	1.40	1.00	1.98	2.1	6	11	8	11
1930.....	45.8	83	8	2.93	2.94	3.28	2.56	T.	5	18	5	7
1931.....	52.2	87	17	5.42	5.58	5.32	5.35	1.4	11	10	5	15
1932.....	39.5	75	-9	1.87	1.55	2.11	1.95	4.5	5	16	5	9
1933.....	45.9	83	7	0.93	0.47	0.96	1.37	0.2	4	16	6	8
1934.....	48.5	84	16	5.71	5.62	5.84	5.67	4.6	10	14	5	11
1935.....	42.2	82	10	4.16	4.52	4.69	3.28	0.1	10	8	4	18
1936.....	42.2	79	0	1.89	1.15	2.04	2.49	1.4	3	21	4	5
1937.....	41.0	90	-7	1.85	1.58	1.87	2.11	4.1	7	15	6	9
Period.....	44.3	90	-9	2.64	2.15	2.58	3.20	1.0	6	14	6	10

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## Climatological Data for November 1937

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches				Number of days				Prevailing direction of wind	Observers	
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelting	With precip., .01 inch or more	Clear	Partly cloudy			Cloudy
Northern Division																				
Bethany	Harrison	916	42	36.6	- 6.2	81	1	- 6	21	39	0.94	-1.10	0.51	4.6	4	16	7	7	nw.	A. S. Cumming
Brunswick	Chariton	652	56	37.6	- 4.0	85	1	- 2	22	42	1.44	-0.75	0.55	3.0	6	18	4	8	ne.	O. K. Benecke
Chillicothe	Livingston	779	28	36.8	- 4.5	84	1	- 2	21	41	1.61	-0.51	0.56	8.0	6	19	3	8	nw.	Wm. J. Olenhouse
Clifton Hill	Randolph	731	38	37.2	- 6.2	82	1	0	21	33	1.49	-0.49	0.52	7.5	6	16	6	8	nw.	Dr. A. J. Bradsher
Columbia	Boone	740	47	40.0	- 3.3	84	1	6	21	35	2.27	+0.07	0.70	2.1	5	11	12	7	nw.	U. S. Weather Bureau
Conception	Nodaway	980	48	37.5	- 3.9	78	1	- 3	21	37	1.01	-0.73	0.67	6.8	4	8	17	5	nw.	Fr. Adelhelm Hess
Downing	Schuyler	876	16	38.4	- 3.2	82	1	2	21	38	0.83	-1.15	0.55	4.5	4	17	3	9	n.	Everett Rowe
Edgerton	Platte	856	17	38.5	- 3.3	82	1	0	21	38	1.13	-0.84	0.68	4.0	7	19	1	10	n.	Fred L. Stiff
Elsberry	Lincoln	449	6	40.0	.....	86	1	7	21	43	2.11	.....	1.00	2.5	5	14	10	6	n.	Ray E. Mills
Fayette	Howard	680	57	40.0	- 2.2	84	1	1	21	38	2.43	+0.33	0.81	4.5	6	16	7	7	.....	Harry P. Mason
Fulton	Callaway	818	49	40.4	- 3.8	85	1	7	21	37	2.32	+0.01	0.71	2.0	5	14	9	7	nw.	Clyde C. Herring
Gorin	Scotland	700	50	.....	.....	.....	.....	.....	.....	.....	1.37	-0.66	0.56	8.0	5	19	5	6	nw.	W. L. Harker
Grant City	Worth	1,134	33	36.4	- 5.5	78	1	- 7	21	36	1.23	-0.62	0.56	7.8	5	10	8	12	sw.	Howard Rybolt
Hannibal	Marion	759	45	39.9	- 2.2	82	1	3	21	37	1.50	-0.56	0.52	4.7	8	9	9	12	nw.	Hannibal Water Dept.
Kansas City	Jackson	741	48	39.8	- 3.9	83	1	5	21	35	1.33	-0.50	0.64	3.4	5	9	12	9	sw.	U. S. Weather Bureau
Kansas City University	Jackson	908	0	41.0	.....	86	1	5	21	32	1.30	.....	0.70	4.5	3	16	6	8	nw.	University of Kansas City
Kidder	Caldwell	1,020	45	38.2	- 3.6	82	1	- 2	21	32	1.23	-0.92	0.51	5.5	5	14	9	7	nw.	Roscoe L. Terry
King City	Gentry	1,095	11	.....	.....	.....	.....	.....	.....	.....	1.11	-0.85	0.40	4.7	6	6	19	5	nw.	John M. Martin
Kirksville	Adair	969	48	37.4	- 3.2	82	1	- 1	22	39	1.20	-0.92	0.47	11.0	6	14	8	8	nw.	Charles Noble
Lawson	Ray	1,050	0	38.6	.....	82	1	- 1	21	33	1.70	.....	0.73	6.1	6	15	7	8	nw.	Elmer E. Lamb
Linneus	Lin.	816	5	.....	.....	.....	.....	.....	.....	.....	1.39	.....	0.55	5.5	6	17	8	5	nw.	H. D. Taggart
Louisiana	Pike	469	43	39.7	- 4.4	80	1	5	22	40	2.06	-0.40	0.80	1.0	5	20	5	5	w.	Stark Bro's Nurseries
Macon	Nodaway	875	38	37.2	- 5.6	87	1	0	21	37	2.28	+0.09	0.80	7.5	7	17	8	5	nw.	W. C. Brown
Maryville	Nodaway	1,169	47	36.8	- 2.6	77	1	- 1	21	35	1.15	-0.77	0.56	6.8	6	12	5	13	nw.	R. B. Montgomery
Mexico	Audrain	800	48	38.0	- 4.9	84	1	3	21	48	2.44	+0.21	0.68	4.0	6	23	0	7	s.	Mrs. Abbie Snoddy
Moberly	Randolph	875	0	36.5 <sup>b</sup>	.....	80	1	0	21	41	1.85	.....	0.78	4.2	6	12	9	9	nw.	McCormick Hospital
Oregon	Holt	1,048	81	38.8	- 1.7	78	1	0	21	36	1.52	-0.46	0.80	9.0	6	16	8	6	nw.	Miss Mina Wright
St. Charles	St. Charles	520	49	41.0	- 4.3	87	1	10	21	46	1.33	-0.78	0.66	1.0	4	19	5	6	nw.	Martin L. Comann
St. Joseph	Buchanan	957	27	38.6	- 2.9	79	1	4	21	33	1.22	-0.36	0.59	6.1	7	17	6	7	nw.	U. S. Weather Bureau
Steffenville	Lewis	650	39	38.8	- 4.7	84	1	0	21	40	2.05	-0.14	0.67	7.0	9	16	6	8	s.	Frank Hall
Tarkio	Atchison	916	34	37.0	- 3.1	77	7	- 3	21	37	0.62	-1.12	0.20	4.0	4	15	5	10	sw.	Albert Volker
Trenton	Grundy	822	41	38.4	- 3.8	82	1	- 1	21	36	1.32	-0.75	0.68	7.5	5	18	9	3	s.	W. H. Estes
Unionville	Putnam	1,062	44	36.7	- 3.6	85	1	- 1	22	41	1.44	-0.76	0.60	5.0	4	14	3	13	w.	John H. Schick
Warrenton	Warren	816	55	41.4	- 1.8	85	1	7	21	37	2.14	-0.48	0.77	3.5	6	14	9	7	nw.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.	574	66	37.8	- 3.3	80	1	4	21	33	1.92	-0.02	0.99	5.5	7	16	5	9	sw.	U. S. Weather Bureau
Division means and extremes				38.5	- 3.8	87	1	- 7	21	48	1.58	-0.57	1.00	5.2	6	15	7	8	nw.	
Southwestern Division																				
Appleton City	St. Clair	813	42	39.6	- 6.4	86	1	5	21	40	2.29	-0.01	0.58	3.5	6	20	0	10	sw.	Rolla Brown
Bolivar	Polk	1,071	43	43.1	- 3.7	84	1	7	21	33	1.73	-0.85	0.77	6.0	7	15	9	6	nw.	Southwest Baptist College
Boonville	Cooper	650	61	40.8	.....	83	1	6	21	38	2.50	+0.29	0.58	5.1	6	10	12	8	nw.	J. V. Suddath
Clinton	Henry	765	44	40.6	- 6.4	85	1	0	21	38	2.87	+0.71	0.94	8.5	8	.....	.....	.....	.....	U. S. Weather Bureau
Dean H.	McDonald	1,000	33	45.4 <sup>h</sup>	- 3.9	83	1	.....	.....	.....	1.77	-1.58	0.63	2.5	5	15	2	13	ne.	E. S. Taylor
Eldon	Miller	934	42	39.2 <sup>b</sup>	- 5.6	86	1	7	21	42	2.09	-0.36	0.66	3.0	6	12 <sup>b</sup>	12 <sup>b</sup>	4 <sup>b</sup>	nw.	E. H. Shepherd
Garber	Taney	950	2	42.8	.....	86	1	5	21	49	1.40	.....	0.73	2.1	6	7	3	20	nw.	William H. Durham
Harrisonville	Cass	904	59	36.2	- 6.3	83	1	0	21	37	1.82	-0.32	0.74	8.0	7	11	7	12	sw.	John H. Patterson
Jefferson City	Cole	557	47	38.8	- 5.3	82	1	7	21	37	2.80	+0.41	1.10	1.0	7	8	19	3	n.	Mrs. Frank Kliegel
Lakeside	Miller	595	6	41.2	.....	85	1	9	21	41	2.02	.....	0.60	.....	.....	.....	.....	.....	sw.	W. S. Frame
Lamar	Barton	980	49	41.5	- 4.8	87	1	10	21	41	1.45	-1.08	0.80	8.0	4	18	3	9	nw.	Jesse A. Mann
Lebanon	Laclede	1,265	49	42.1	- 3.5	84	1	4	21	39	1.29	-1.35	0.25	4.5	8	13	7	10	sw.	Mrs. Rosa E. Montelius
Lexington	Lafayette	688	52	39.1	- 5.1	84	1	3	21	35	2.05	-0.07	0.70	8.0	7	16	9	5	w.	Miss Carrie Loomis
Lockwood	Dade	1,078	31	43.4	- 3.6	84	1	12	20	32	1.54	-1.30	0.62	6.0	6	20	0	10	nw.	Hubert A. Nieman
Marshall	Saline	779	50	40.6	- 4.6	84	1	3	21	40	2.08	-0.24	0.61	2.5	7	17	6	7	sw.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	36	41.7	- 4.2	90	1	3	21	37	2.64	-0.31	0.62	11.5	10	15	7	8	s.	Mo. Fruit Exp. Sta.
Mount Vernon	Lawrence	1,174	38	42.6	- 3.2	82	1	9	21	42	1.54	-1.40	0.50	6.3	7	19	0	11	nw.	G. H. Boswell
Neosho	Newton	1,011	50	43.2	- 4.1	83	1	9	21	40	1.33	-1.97	0.51	3.8	9	17	3	10	nw.	U. S. Fisheries Sta.
Nevada	Vernon	862	44	42.2	- 2.6	85	1	5	21	37	1.35	-0.80	0.40	4.0	5	19	4	7	sw.	T. J. Kanpp
Sedalia	Pettis	910	17	41.4	- 1.9	85	1	4	21	38	2.60	+0.98	0.65	5.0	8	17	6	7	n.	Mrs. Laura S. Trader
Seligman	Barry	1,542	36	43.0	- 4.3	79	1	8	21	31	2.66	-0.43	1.09	6.0	7	14	3	13	sw.	Floyd E. Fawver
Seymour (near)	Webster	1,642	31	40.8	- 5.1	80	1	1	21	38	1.69	-1.20	0.59	5.0	8	15	5	10	s.	A. L. Hailey
Springfield	Greene	1,301	49	42.0	- 3.7	81	1	9	21	30	1.72	-1.07	0.54	7.5	11	14	5	11	s.	U. S. Weather Bureau
Versailles	Morgan	1,037	11	41.6	- 3.3	86	1	1	21	38	2.18	-0.19	0.61	2.2	8	14	7	9	nw.	I. M. Wilson
Warrensburg	Johnson	878	50	41.0	- 4.0	85	1	- 1	21	40	2.05	-0.17	0.75	5.0	6	15	7	8	nw.	E. A. Markey
Warsaw	Benton	687	36	42.8	- 4.4	86	1	2	21	37	2.23	-0.41	0.62	3.0	9	17	4	9	n.	Everett Martin
Division means and extremes				41.4	- 4.3	90	1	- 1	21	49	1.87	-0.71	1.10	5.1	7	15	6	9	nw.	
Southeastern Division																				
Advance	Stoddard	355	0	44.4	.....	83	1	13	21	38	2.40	.....	0.63	T.	10	.....	.....	.....	.....	U. S. Weather Bureau
Arcadia	Iron	926	56	40.4	- 3.5	83	1	9	23	45	2.79	-								



## Daily Precipitation for November 1937

Stations	Drainage-basins	Day of month																														Total			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		..		
Northern Division																																			
Amity III	Grand	T.	T.		T	.32			.10											.07	T.	T.													1.50
Bethany	do	T.			.13				.14											.16	T.														0.94
Bowling Green III	Mississippi		.82			.62			.51												.07														2.12
Brunswick III	Grand				.54				.12											.03	.18														1.44
Canton II	Mississippi		.25		.26				.16												.18														1.49
Chillicothe III	Grand				.39				.17												.20														1.61
Clifton Hill	Chariton		.22		.52	.05			.23											.19	T.	T.													1.49
Columbia***	Missouri	.57			.70				.30											.15	T.	T.													2.27
Conception	do	T.			.07				.20											.07	T.														1.01
Downing	Mississippi		.02		T				.11											.15	T.	T.													0.83
Edgerton	Missouri	T.			.68	.01			.02								T.			.05															1.41
Edina III	Mississippi		.06		.16				.22											T.	.15														1.33
Elsberry	do		.33		.40			1.00												.10	T.	T.													2.11
Farber I	do		.48		.64				.48											.05	.25														2.42
Fayette	Missouri		.47		.67				.25											.23															2.43
Fulton III	do		.43		.58				.71												.15														2.32
Gallatin II	Grand				.20				T.											.14	T.	T.													0.94
Gorin	Mississippi	T.			T.	.25			.32								T.	T.		.12	T.														1.37
Grant City	Grand	.12			.04	T			.31											.20	T.	T.													1.23
Hannibal	Mississippi		.52		.17	.22			.11											.20	T.	T.													1.50
Hermann I	Missouri		.92		.32				.55	.07											.08		T.												2.35
Kahoka III	Mississippi		.12		.18	T.			.60											.10		T.													1.77
Kansas City***	Missouri	T.			.64			.01	T.											.19	T.	T.													1.33
Kansas City University	do				.70				T.											.20	T.														1.30
Kidder III	Grand				.43				.10											.10	T.														1.23
King City	Missouri				.23				.21											.22															1.11
Kirkville	Mississippi				.13				.24											.25															1.20
LaBelle III	do		.19		.26															T.	.14														1.29
Lawson	Missouri	T.			.73				.07											.25	.02														1.70
Linneus III	Grand		T.		.23				.40											T.	.10	.08	T.												1.39
Louisiana	Mississippi		.80		.66				.35												.10														2.06
Lucerne III	Grand				.07				.28											.19															0.89
Macon II	Chariton		.38		.38				.51											.04	.12														2.28
Madison III	Mississippi		.80		.70				.17												.20														2.53
Maryville	Missouri	.01			.05				.35											.15	.03														1.15
Memphis III	Mississippi		.08		.17				.25											.03	.09	T.	T.												1.19
Mexico II	do		.46		.68				.60											.03	.09	T.	T.												2.44
Nifan I	Grand				.12				.20											.20	.06														1.34
Moberly	Mississippi				.54	.02			.19											.20															1.85
Monroe City	do		.53		.52				.29											.32															2.02
New London III	do				.58															.27															1.15
Oregon	Missouri	T.			.35				.15											.10															1.52
Palmyra III	Mississippi		.48		.30				.10											.10															1.18
Paris III	do		.94		.63				.20											.02	.20														2.68
Perry	do		.62		.61				.30											.02	.20														1.92
Philadelphia III	do				.42				.30											.15															1.23
St. Charles	Missouri		.25						.20	.12										.14															1.22
St. Joseph***	do	T.			.44			T.	.05											.10	T.	T.	T.	T.											1.93
Shelbina III	Mississippi		.59		.41				.16											.10	T.	T.	T.	T.											1.22
Shelbyville III	do		.12		.50				.19											.10	T.	T.	T.	T.											1.93
Steffenville	do		.40		.67	.20			.17											.15															1.51
Turkio	Missouri	.12			.18				.13											.20	T.	T.	T.	T.											2.05
Trenton	Grand	T.			.18				.13											.12															0.62
Troy III	Mississippi		.49		.55				.36	.11										.29	T.	T.	T.	T.											1.37
Unionville III	Chariton				.09				.45											.30	.08														1.89
Warrenton	Mississippi		.54		.10	.31			.77											.12	T.	T.	T.	T.											1.44
Waukegan, Ia.***	do	.99			.01	.16			.10											.21	T.	T.	T.	T.											2.14
Southwestern Division																																			
Altona III	Osage		.06		.61				.32										.20		.40														2.02
Appleton City	do		.29		.58				.39										.39		.15	T.	T.								</				



## Daily Precipitation for November 1937—Continued from preceding page

Stations	Drainage-basins	Day of month																														Total		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		..	
Southeastern Div.—Concluded																																		
Birch Tree (near).....	Black.....					.22				.16											.03												2.24	
Bragg City   .....	St. Francis.....	T.				.05			T.	1.05	.65	.45				T.	.12			T.													3.19	
Campbell.....	do.....	.15							.80	.65							.27			T.								T.		.22	.72		2.60	
Cape Girardeau	Mississippi.....	.28			.16				.60	.05	.06	.10					.12	.02			.11	T.											2.07	
Caruthersville	do.....				.17				.77	.68	.27						.10	.20		T.		T.								.01	.57		2.65	
Centerville	Black.....	.39			.41				.27	.09			T.				.17		.20		.26										1.24		2.83	
Crystal City	Mississippi.....	.28			.31				.10	.08							T.			T.												.85	1.62	
Cuba	Meramec.....	.03			.43																											.30	0.76	
Dexter	St. Francis.....	.34			.09				.73		.17	T.					.11	.07		T.	.09	T.	T.						T.			1.60		
Doniphan.....	Black.....	.10		.02	.22		.12	.48		.75	.02						.18			T.											.80		2.69	
Farmington.....	St. Francis.....	.34		.10	.29				.55		.02						.04		.04	.05	T.									1.10	.77		2.53	
Fisk	do.....	.07	T.		.11	T.	.06	.21	.19	.32	.09						.06	.05			T.											.17	1.32	
Fredericktown	do.....				.35			.20				.18				T.					.34											.99	2.47	
Goodland.....	Black.....	.43			.41					.23							.10		.05	.11											.85		2.18	
Greenville.....	St. Francis.....	.16			.24				.78		.64						.25															.98	3.05	
Jackson.....	Mississippi.....	.30			.32			.15	.51		.15						.06				T.											.77	2.35	
Jerome	Gasconade.....	.44			.45				.10	.28							T.			.02	T.										.09	.46	1.75	
Koshkoning.....	Black.....			.08			T.	.50		.90	T.						.40			.05												1.15	3.08	
Leeper	do.....	.08			.25		.20	.35		.30							.20	T.														1.45	2.83	
Licking (near).....	Gasconade.....	.21			.43			.15									.14		.04	.06												.40	1.43	
Marble Hill.....	Mississippi.....	.30			.30		.15	.65		.20							.15															.88	2.71	
Meramec Park	Meramec.....	.32			.36			.19	.20													.01									.08	.71	1.79	
Morehouse.....	Mississippi.....	.28			.20		.08	.44	.02	.44							.15			T.	T.											.62	2.35	
New Madrid	do.....	T.	.21		.19			.64	.73	.27							T.	.20		.02	.05	T.									.12	.30	2.61	
Owensville	Gasconade.....	.20			.31			.09	.15								.21	T.		T.			T.									.51	1.26	
Parma	St. Francis.....				.28			.10	.35	.32	.10																						1.36	
Poplar Bluff	Black.....	.11			.35		.02	.65	.03	.34	.17						**	.28		.05	.02											.75	2.77	
Richwoods	Meramec.....	.30			.35			.15									T.		T.														.72	1.52
Rolla.....	do.....	.46		.26	.18			.41									T.		.06	T.	T.	T.										.18	1.65	
St. Louis***	Mississippi.....	.05	.05		.11	.01		.17		.05							T.		.04	T.	T.											.48	1.19	
St. Louis Airport*	Missouri.....	.13	.21		.11	.01	T.	.13												.04	T.											.42	T.	1.19
St. Louis University*	Mississippi.....	.12	.02		.08			.14												.03	.02	T.										.71	T.	1.18
Salem.....	Meramec.....	.28		.06	.34			.08									.20			T.													.59	1.55
Stikeston	Mississippi.....	.18			.18			.10	.45	.35	.12						.01	.02															.71	2.14
Union.....	Meramec.....	.21			.15			.16												T.												.02	.62	1.14
Valley Park	do.....	.20			.12			.05	T.								T.			T.	T.	T.										.82	1.19	
Van Buren.....	Black.....				**	.11		.85									.06			T.	T.											.14	1.27	
West Plains.....	do.....				.14			.46		.55	T.						.33			T.	T.											.80	2.45	
Williamsville	do.....	.05			.03	.15		.13	.16	.05	.15	.22					.16	.06				.03										.77	1.94	
Willow Sprgs. (near)	White.....	.05			.22				.13	.40	.17						.35		.12													.50	1.94	
Zalma	Mississippi.....				.46			.60			.62						.15	.12														.90	2.85	
Calro, Ill.***	do.....	.13		.16	.02		T.	.60		.29	T.						.10		.07	.02	T.						T.				.06	.54	1.99	

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. || Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. T. Trace, or less than 0.01 inch.  
 \*\*\* Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. \*\* Precipitation in the next following measurement; separate dates of fall not recorded. \* Precipitation is for 24-hour period, midnight to midnight † Estimated. ‡ Partially estimated. |||| Incomplete.

## Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for November 1937

(See precipitation data in table on preceding page)

Station	Data	Day of month																														Monthly		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		..	
Lakeside ..... (Osage Dam)	{ Evaporation .....	.170	.274	.174	.098	†††	.107	.139	.205	.141	.046	.098	.058	.095	.263	.105	.034	****	.109	****	****	****	****	****	****	****	288	.010	†††	****	****	.041	....	2.420
	{ Mean temperature ..	68	53	42	36	46	50	58	64	46	52	49	51	48	46	40	31	32	32	24	20	19	28	30	36	44	46	46	30	32	36	...	41.2	
	{ Wind movement ..	52	117	92	55	70	62	88	147	58	47	52	44	87	185	99	104	96	81	152	181	94	55	39	59	104	73	40	145	68	59	..	2,605	

Observations taken at 7.30 a. m. Wind movement corrected to true velocities. For description see April 1932 report.

\*\*\*\* Evaporation included in next measurement. ††† —.014. †††† —.021.

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## MISCELLANEOUS PHENOMENA

Duststorms.—12th, local.  
 Earthquake.—17th.  
 Fog.—Dense, 5th, 9th, 11th, 12th, 22d, 26th, 27th, 28th, 30th.  
 Hail.—Light, on 1st at Columbia and Macon; moderate, on

1st at Lexington.

Halos.—Solar, 1st, 7th, 8th, 9th, 10th, 17th, 25th, 26th; lunar, 9th, 10th, 11th, 17th.

Sleet.—4th, 15th, 16th, 27th, 28th.

Smoke.—Dense, 4th, 9th, 12th, 22d, 23d, 24th, 29th.

Thunderstorms.—Local, 4th, 27th; more or less general, 1st, 2d, 8th.

Windstorms.—No damaging winds reported.



## Daily Temperatures for November 1937

Stations	Day of month																														Mean	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
Northern Division																																
Bethany.....	Maximum..	81	56	53	53	59	69	74	68	68	71	66	66	56	43	40	33	34	31	27	15	22	31	40	48	54	48	45	25	29	35	48.0
Bethany.....	Minimum..	56	37	17	29	38	36	46	44	35	32	36	35	39	33	29	27	11	25	13	6	-6	-5	12	26	37	25	23	4	4	10	25.1
Brunswick §§.....	Maximum..	85	56	49	51	57	69	81	61	68	69	50	68	65	46	37	34	35	31	26	21	26	35	41	50	51	60	62	31	31	36	49.1
Brunswick §§.....	Minimum..	48	37	25	23	33	34	39	50	35	35	36	35	36	29	17	16	19	11	3	2	4	12	28	30	29	13	12	21	21	21	26.1
Chillicothe §§.....	Maximum..	84	56	48	55	58	71	75	61	71	71	54	68	56	44	36	33	36	30	22	17	24	36	42	43	56	59	51	35	31	31	48.6
Chillicothe §§.....	Minimum..	51	38	18	26	38	39	43	46	36	34	35	33	34	34	33	27	13	14	17	8	-2	-1	1	16	28	29	29	8	14	15	25.1
Clinton Hill.....	Maximum..	82	70	47	47	48	61	70	69	57	60	60	59	59	50	40	35	31	29	28	21	18	35	36	44	52	52	51	27	25	36	46.6
Clinton Hill.....	Minimum..	55	38	21	28	39	35	49	49	36	37	38	35	44	33	31	28	14	18	16	7	0	2	12	25	38	31	26	9	21	18	27.8
Columbia.....	Maximum..	81	56	45	46	56	69	76	66	65	68	58	65	59	46	38	33	36	33	24	20	24	35	42	52	60	59	55	34	33	40	49.3
Columbia.....	Minimum..	49	40	27	31	40	39	54	42	37	45	41	38	44	35	33	26	19	23	18	12	6	12	20	28	40	38	24	15	24	24	30.8
Conception.....	Maximum..	78	55	50	55	57	68	73	69	68	70	62	67	60	42	39	33	33	30	23	18	27	32	42	48	55	56	49	25	25	33	48.1
Conception.....	Minimum..	54	35	20	34	37	40	45	41	43	38	36	30	42	33	30	22	11	21	15	4	-3	8	16	27	38	38	21	6	9	16	26.9
Downing.....	Maximum..	82	66	51	58	56	67	78	68	76	..	70	63	57	45	44	46	41	30	28	25	36	35	40	56	55	62	60	27	30	38	51.1
Downing.....	Minimum..	50	37	17	25	38	35	45	46	38	..	36	28	41	32	31	27	12	22	12	2	3	13	23	32	30	22	12	15	12	12	25.8
Edgerton.....	Maximum..	82	59	52	49	59	71	74	68	66	71	57	69	60	49	42	34	36	31	27	25	22	32	40	48	55	59	52	29	35	36	49.6
Edgerton.....	Minimum..	58	40	22	29	38	39	53	45	32	33	35	37	42	33	26	27	12	26	15	11	0	9	14	29	38	25	24	1	14	14	27.4
Elsherry.....	Maximum..	86	75	48	51	63	66	77	67	66	67	59	64	60	52	43	40	37	34	33	24	30	34	43	53	64	59	59	37	33	40	52.1
Elsherry.....	Minimum..	46	24	18	39	23	42	46	41	38	39	28	47	36	34	30	19	24	20	16	7	7	10	20	28	32	36	16	19	18	18	27.8
Fayette.....	Maximum..	84	78	48	46	57	68	76	70	66	66	59	65	58	51	41	43	35	34	34	26	25	42	41	52	57	59	53	28	37	38	51.2
Fayette.....	Minimum..	48	40	25	22	39	30	43	47	39	41	40	32	44	35	31	16	28	17	10	1	8	10	25	38	30	28	11	20	24	24	28.7
Fulton §§.....	Maximum..	85	58	51	47	58	71	78	61	66	67	60	68	60	47	38	32	38	33	25	20	28	38	44	55	62	58	60	34	37	43	50.7
Fulton §§.....	Minimum..	48	33	27	23	38	35	43	55	33	43	42	33	42	38	35	31	14	24	20	11	7	9	13	25	33	30	44	16	22	25	30.1
Grant City.....	Maximum..	78	56	50	52	59	68	73	62	69	70	60	66	46	44	39	32	34	29	17	24	30	40	47	54	58	48	27	28	35	47.7	
Grant City.....	Minimum..	53	36	14	30	37	38	45	42	36	34	35	44	32	30	25	9	18	15	3	7	-4	14	26	38	28	21	2	3	11	25.1	
Hannibal.....	Maximum..	82	77	45	55	65	65	76	69	67	67	59	65	57	48	41	34	34	30	27	20	28	32	40	50	57	56	58	31	30	36	49.7
Hannibal.....	Minimum..	48	40	22	29	38	41	53	50	38	41	39	32	46	39	34	29	15	26	18	14	3	10	13	27	38	35	30	12	22	19	30.1
Kansas City.....	Maximum..	83	56	52	48	59	71	74	68	66	67	55	70	59	50	36	33	34	32	26	25	21	33	41	49	54	59	54	34	30	35	49.1
Kansas City.....	Minimum..	48	31	21	41	42	45	57	49	37	38	39	40	45	36	29	23	18	20	16	8	5	12	16	31	40	34	19	9	20	25	30.5
Kansas City Univ. ...	Maximum..	86	64	51	46	59	71	75	69	66	67	60	71	60	52	45	34	37	32	27	25	21	34	41	49	55	60	54	32	32	39	50.5
Kansas City Univ. ...	Minimum..	64	43	31	34	40	41	55	49	36	41	40	39	45	36	32	29	17	27	16	13	6	12	18	28	37	31	26	12	21	25	31.4
Kidder.....	Maximum..	82	60	49	51	56	69	73	70	67	69	62	66	58	48	39	34	33	29	27	21	23	33	39	48	53	57	51	28	27	35	48.6
Kidder.....	Minimum..	56	38	31	39	37	47	44	39	37	35	35	40	34	31	27	13	25	17	8	-2	3	14	26	37	30	24	8	11	15	27.9	
Kirksville.....	Maximum..	82	67	49	53	56	67	74	68	66	72	62	65	57	47	39	33	35	29	27	20	31	34	39	47	55	56	49	24	28	36	49.2
Kirksville.....	Minimum..	49	36	19	20	38	33	50	47	38	33	39	31	42	32	33	27	11	22	14	11	0	-1	10	19	38	28	23	8	12	8	25.7
Lawson.....	Maximum..	82	59	52	49	59	69	73	67	66	69	58	68	62	50	39	33	36	32	27	23	23	32	39	47	54	58	52	31	31	35	49.2
Lawson.....	Minimum..	58	37	22	30	38	39	49	44	39	37	36	35	40	32	28	13	27	16	8	-1	8	15	26	37	33	24	11	15	20	28.1	
Louisiana.....	Maximum..	80	62	45	50	56	67	78	70	70	69	65	60	57	50	45	36	38	32	25	20	30	30	40	50	63	65	58	40	38	40	51.0
Louisiana.....	Minimum..	49	42	24	20	37	30	48	50	30	30	39	26	47	36	35	30	20	23	18	15	7	6	10	22	34	30	38	15	23	18	28.4
Macon §§.....	Maximum..	87	44	47	51	56	68	79	60	69	67	55	67	55	43	37	34	35	31	24	21	25	34	40	49	57	59	55	27	30	36	48.1
Macon §§.....	Minimum..	50	38	20	25	35	39	46	48	35	36	36	30	32	33	27	13	14	15	9	0	5	13	20	30	32	35	9	15	16	26.3	
Maryville.....	Maximum..	77	55	48	51	57	67	74	69	70	69	59	67	58	42	36	30	30	28	22	15	21	25	40	48	55	57	47	26	29	38	47.0
Maryville.....	Minimum..	51	33	29	32	36	34	43	42	35	34	37	40	32	30	21	11	21	15	5	-1	25	40	48	55	57	47	26	29	38	47.0	
Mexico §§.....	Maximum..	84	60	51	48	59	62																									



## Daily Temperatures for November 1937—Continued from preceding page

Stations	Day of month																															Mean		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	..			
Southwestern Division—Concluded																																		
Neosho.....	Maximum...	83	79	57	54	62	70	73	70	61	56	68	72	67	60	58	44	33	34	32	28	27	37	46	54	60	63	59	45	44	49	..	54.8	
	Minimum...	52	43	37	32	40	30	56	56	34	46	34	38	38	28	27	27	27	17	12	9	24	18	22	29	33	31	15	25	24	..	31.7		
Nevada.....	Maximum...	85	77	52	52	61	70	71	71	62	68	65	72	64	56	48	37	34	33	31	29	24	35	44	54	59	65	53	41	41	48	..	53.4	
	Minimum...	58	40	32	31	38	40	57	52	34	44	36	36	42	36	29	27	16	28	15	13	5	18	20	25	37	36	26	13	24	26	..	31.1	
Sedalia.....	Maximum...	85	77	51	49	59	69	74	68	64	67	63	70	62	56	45	36	40	34	28	24	25	39	44	53	59	60	49	38	36	40	..	52.1	
	Minimum...	59	39	29	32	38	38	53	50	38	54	39	37	42	35	30	28	18	20	17	9	4	12	17	27	40	35	27	12	22	24	..	30.8	
Seligman.....	Maximum...	79	73	52	48	58	68	74	68	55	54	68	70	64	57	53	43	33	34	33	24	25	33	44	55	60	61	54	41	44	49	..	52.5	
	Minimum...	52	44	38	42	38	37	54	54	43	42	44	42	42	37	38	24	21	23	14	10	8	20	24	24	37	41	32	24	28	24	..	33.4	
Seymour(near).....	Maximum...	80	67	55	50	56	66	73	68	56	53	63	64	64	56	51	37	34	34	31	23	22	36	41	48	58	57	54	46	42	47	..	51.1	
	Minimum...	52	42	31	27	37	28	51	51	34	44	41	42	39	36	29	25	22	25	15	11	1	20	14	26	31	32	42	15	28	26	..	30.6	
Springfield.....	Maximum...	81	57	52	46	57	68	73	67	57	58	64	67	61	54	48	37	32	29	31	26	23	25	33	40	40	59	59	54	45	38	46	..	50.0
	Minimum...	55	43	36	38	42	40	54	49	46	48	45	43	46	37	32	26	23	26	15	13	9	22	24	29	38	42	24	17	32	30	..	34.1	
Versailles.....	Maximum...	86	78	54	42	59	68	76	72	61	66	56	72	62	55	43	34	43	35	30	23	24	41	48	56	60	61	56	38	41	44	..	52.8	
	Minimum...	56	40	28	28	39	36	55	51	34	41	37	38	45	34	30	23	18	30	16	10	1	9	15	26	38	35	31	14	22	25	..	30.3	
Warrensburg.....	Maximum...	85	80	51	46	58	69	73	69	63	66	60	71	65	55	46	36	38	32	30	26	25	37	41	50	57	59	52	33	35	42	..	51.7	
	Minimum...	62	40	28	35	40	41	51	51	37	40	37	39	42	35	28	29	17	26	16	9	1	9	7	29	39	35	27	15	23	26	..	30.4	
Warsaw.....	Maximum...	86	79	54	46	62	71	74	76	63	69	64	71	71	64	51	42	40	36	32	29	28	41	45	53	62	62	59	40	41	46	..	55.2	
	Minimum...	57	42	30	26	33	34	54	52	30	43	39	34	46	36	27	28	21	30	17	12	2	12	12	25	40	30	30	14	22	26	..	30.3	
Southeastern Division																																		
Advance.....	Maximum...	83	71	52	53	62	66	73	63	61	59	61	70	69	57	48	42	43	37	27	34	37	43	52	58	62	60	57	56	44	..	54.8		
	Minimum...	48	50	38	22	42	28	49	56	38	48	50	43	46	43	27	32	30	27	24	22	13	18	13	17	28	47	37	29	27	28	..	34.0	
Arcadia §§.....	Maximum...	83	63	55	52	61	66	74	64	60	61	63	70	65	53	49	32	42	42	23	20	32	36	43	53	63	62	60	38	49	46	..	52.7	
	Minimum...	44	46	34	18	21	26	29	52	30	32	45	34	35	40	34	30	24	25	20	15	10	12	9	11	20	44	41	19	20	26	..	28.2	
Birch Tree(near).....	Maximum...	83	77	59	63	58	63	71	67	57	56	60	70	65	56	50	47	38	37	33	26	31	39	44	54	60	63	59	55	55	58	..	55.1	
	Minimum...	46	43	38	22	38	31	52	53	33	53	45	38	48	39	30	38	25	26	19	12	7	12	16	19	38	40	43	17	27	28	..	32.5	
Campbell.....	Maximum...	86	74	66	69	70	72	73	67	72	63	65	72	70	63	52	42	45	47	40	37	35	40	40	60	65	60	68	60	52	48	..	59.1	
	Minimum...	52	50	35	28	40	35	47	54	47	50	50	46	47	45	37	32	33	30	19	17	13	21	20	26	35	40	35	29	27	27	..	35.6	
Caruthersville §§.....	Maximum...	83	64	55	62	66	69	73	62	63	61	64	70	70	60	55	38	44	46	33	34	35	41	45	56	55	59	61	47	60	47	..	55.9	
	Minimum...	53	59	39	28	28	34	39	48	50	51	49	46	49	43	33	35	30	30	30	22	18	18	23	25	32	42	48	38	29	29	..	36.4	
Crystal City §§.....	Maximum...	82	60	49	53	61	80	..	67	61	63	59	66	..	63	42	36	41	41	22	18	..	34	42	..	65	64	60	..	..	42	..	53.0	
	Minimum...	41	44	28	18	32	25	..	47	28	31	42	31	42	..	31	29	23	25	21	11	..	7	8	13	..	24	31	18	..	..	..	27.1	
Doniphan.....	Maximum...	85	74	60	58	66	68	76	70	60	60	66	72	70	62	52	47	40	40	38	35	36	40	45	59	64	58	66	57	60	49	..	57.8	
	Minimum...	45	52	34	20	40	26	48	56	35	50	52	46	38	44	26	32	29	26	23	18	9	20	14	16	26	47	36	27	26	24	..	32.8	
Farmington.....	Maximum...	81	72	54	53	58	64	72	66	60	60	56	68	62	59	45	40	40	42	34	22	31	35	42	51	60	61	60	55	45	42	..	53.0	
	Minimum...	46	46	32	19	58	27	52	52	32	44	42	34	48	39	33	29	25	27	20	16	11	11	12	20	33	43	43	18	25	26	..	31.4	
Goodland.....	Maximum...	85	80	59	52	59	66	75	73	65	60	70	63	58	50	44	39	42	33	22	33	38	43	53	60	64	58	56	45	45	..	55.4		
	Minimum...	42	45	33	15	38	21	41	21	30	48	40	31	36	36	25	28	22	24	19	13	4	12	6	14	30	38	30	18	23	25	..	26.9	
Greenville.....	Maximum...	82	61	51	55	60	62	71	64	57	57	62	68	59	55	48	44	41	41	36	28	35	38	41	51	60	56	61	55	52	45	..	53.2	
	Minimum...	41	38	34	16	35	22	46	46	30	44	39	36	35	36	25	30	23	24	19	16	6	10	8	12	23	41	32	22	23	24	..	27.9	
Jackson.....	Maximum...	82	78	60	55	61	65	71	69	62	58	60	70	68	62	49	45	44	43	42	28	31	38	42	51	58	60	60	60	52	..	56.1		
	Minimum...	45	45	33	20	40	27	47	53	35	45	47	38	40	39	29	30	22	26	21	20	12	12	12	12	29	46	40	24	25	26	..	31.3	
Koshkonong.....	Maximum...	84	..	73	54	..	63	75	64	..	57	66	68	65	58	53	46	34	34	33	29	32	42	45	57	62	62	58	55	54	46	..	54.6	
	Minimum...	54	..	45	32	..	32	51	52	..	42	50	43	47	41	33	28	26	25	21	15	13	22	25	33	37	42	46	23	32	27	..	34.7	
Licking(near).....	Maximum...	83	68	50	49	57	65	75	68	57	60	62	69	67	62	47	43	37	37	33	29	47	43	53	60	60	57	38	42	45	..	52.9		
	Minimum...	42	42	32	23	38	29	56	52	30	48	41	36	37	38	26	23	26	19	13	5	11	14	24	37	35	37	16	28	27	..	30.3		
Marble Hill.....	Maximum...	84	73	56	56	64	69	75	67	61	58	61	72	70	61	52	43	46	42	38	25	38	39	45	54	60	63	64	57	57	48	..	56.6	
	Minimum...	44	49	35	18	40	26	47	54	32	46	48	38	46	41	27	30	26	25	21	19	11	13	10	15	29	48	37	24	25	25	..</		



## CLIMATOLOGICAL DATA

## MISSOURI SECTION

ROSCOE NUNN  
ST. LOUIS, MO.

Vol. XLI

DECEMBER 1937

No. 12

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## GENERAL SUMMARY

Following an unusually cold November, the first two weeks of December were decidedly wintry. Temperatures went as low as zero, or slightly lower, at many stations in the Northern Division and to zero or near zero in parts of the Southwestern and Southeastern Divisions about the 8th to 11th. Cold weather continued until the 15th, when a slow reaction to warmer began. The last ten days averaged much warmer than normal, especially the last two days; so that the month as a whole was only moderately subnormal in temperature.

Precipitation averaged nearly normal for the State as a whole. In the Southeastern Division more than normal amounts were received at most stations, but in the Southwestern and Northern Divisions amounts generally were less than normal, and much less in about ten counties of the extreme northwestern portion of the State, and also in the west-central border counties, where the totals for the month were less than 1.00 inch, and at some stations less than 0.75 inch. Snowfall was much less than normal. Light to moderate glaze began forming on the night of the 12th in northern sections and it continued to form on the 13th and 14th, extending far southward, and icy surfaces prevailed until the 15th, but the glaze was only of moderate severity in the north and of little consequence in the lower southern portions.

December precipitation would have been generally satisfactory but for the fact that the preceding four months received much less than normal amounts, especially large areas in the north and west, which resulted in severe depletion of subsoil moisture. The usual supplies of water for farm use, from wells, springs, and creeks, were exhausted in various localities, and in such places water had to be hauled considerable distances for livestock.

Wheat and other fall-sown grains and grasses were put in unusually late in many parts of the northern and western counties, due to dry weather which retarded preparations for sowing, and as a result got started late, and in many localities with poor stands. These crops were quite backward at the end of December, and, generally speaking, in only poor to fair condition, although good in some of the better lowland areas.

The principal rivers and their tributaries were very low throughout the month. Lowest stages of all-time record occurred at Grafton, Alton, and St. Louis on the Mississippi.

## TEMPERATURE

The monthly mean temperature for the State, 82 stations reporting, was 32.0°, or 2.0° below normal. The highest monthly mean was 38.0° at Caruthersville, and the lowest monthly mean was 26.0° at Downing and Tarkio. The highest temperature recorded was 66° at Garber on the 30th, and the lowest was two degrees below zero at Conception, Maryville, Oregon, and Unionville on the 8th, and at Conception and Tarkio on the 9th. The greatest daily range was 39° at Dean on the 2d.

## PRECIPITATION

The average precipitation for the State, 140 stations reporting, was 2.24 inches, or 0.07 inch more than normal. The greatest local monthly amount was 4.70 inches at Parma, and the least

local monthly amount was 0.53 inch at King City. The greatest amount in any twenty-four hours was 2.31 inches at Ozark Beach on the 17th. The average number of days with 0.01 inch or more of precipitation was 9. The snowfall averaged 0.6 inch, or 2.8 inches less than normal. The greatest monthly snowfall was 4.2 inches at St. Charles.

(Continued on page 61)

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind				Relative humidity			Percentage of sunshine
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12 noon	6:30 p. m.	
Columbia.....	30.16	30.54	2	29.77	31	8.3	23	nw.	4	85	73	72	30
Kansas City.....	30.17	30.52	28	29.77	23	9.7	30	nw.	7	82	72	72	42
St. Joseph.....	30.17	30.51	20	29.73	31	9.0	27	nw.	8	86	71	72	44
St. Louis.....	30.17	30.58	2	29.73	17	11.5	28	w.	21	80	73	74	27
Springfield.....	30.16	30.54	2	29.69	17	9.8	24	s.w.	21	87	78	79	32
Cairo, Ill.....	30.19	30.61	2	29.61	17	8.7	23	n.	4	84	75	78	23
Keokuk, Iowa..	30.17	30.56	28	29.72	31	8.4	22	nw.	31	79	68	72	30

## COMPARATIVE DATA FOR DECEMBER

Year	Temperature			Precipitation				Number of days				
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy
1888.....	35.9	70	0	2.43	1.88	3.03	2.39	....	6	..	..	..
1889.....	46.8	80	-2	1.09	0.60	0.85	1.82	0.1	3	..	..	..
1890.....	36.0	76	-3	1.18	0.82	1.14	1.57	4.6	3	..	..	..
1891.....	39.8	72	-1	1.88	1.91	1.67	2.06	....	6	..	..	..
1892.....	29.4	75	-22	2.50	1.69	2.76	3.04	4.8	6	8	7	16
1893.....	35.2	76	-7	0.97	0.80	0.67	1.44	2.7	5	11	11	9
1894.....	36.7	75	-7	2.41	1.19	2.33	3.70	1.3	5	14	8	9
1895.....	34.3	69	-8	6.40	5.12	8.57	5.50	3.4	8	9	8	14
1896.....	38.6	79	-5	0.92	0.84	1.17	0.75	T.	3	13	8	10
1897.....	29.3	74	-14	3.03	1.92	2.98	4.19	6.3	7	8	15	15
1898.....	28.7	74	-20	1.65	1.62	1.84	1.48	5.1	5	17	6	8
1899.....	30.4	75	-13	2.22	1.90	2.02	2.74	6.6	9	12	9	10
1900.....	35.6	68	-3	0.79	0.47	0.55	1.35	0.6	4	14	8	9
1901.....	28.5	71	-29	3.20	2.26	2.98	4.35	6.9	8	11	7	13
1902.....	30.7	68	-7	3.32	2.02	2.76	5.18	3.1	8	10	4	17
1903.....	30.2	65	-11	1.70	1.05	1.56	2.49	2.3	5	16	7	8
1904.....	32.9	75	-10	1.55	1.56	1.24	1.84	6.0	5	16	7	8
1905.....	33.3	66	-2	1.71	0.79	1.44	2.89	1.7	4	18	6	7
1906.....	36.1	73	0	2.52	1.67	1.85	4.06	0.6	8	8	6	17
1907.....	37.7	76	3	1.75	1.22	1.69	2.34	3.7	7	11	7	13
1908.....	38.4	80	-4	0.78	0.54	0.94	0.86	T.	3	16	7	8
1909.....	24.9	76	-17	2.87	2.82	2.80	3.00	7.7	8	12	6	13
1910.....	31.2	67	-5	1.49	0.94	1.14	2.40	2.4	4	16	5	10
1911.....	36.7	74	-11	2.85	2.74	2.56	3.26	5.1	7	13	6	12
1912.....	36.5	72	-2	0.62	0.54	0.49	0.82	0.6	3	19	5	7
1913.....	38.3	74	-3	2.26	2.11	2.84	1.83	6.6	7	9	4	18
1914.....	26.8	68	-18	2.51	1.69	2.20	3.65	6.6	9	7	5	19
1915.....	34.7	68	-13	2.99	1.48	2.45	5.03	7.8	6	12	6	13
1916.....	31.3	82	-29	1.92	0.78	1.54	3.44	4.4	6	15	6	10
1917.....	25.5	82	-23	0.76	0.41	0.75	1.13	7.3	5	11	7	13
1918.....	40.0	83	-12	3.23	2.27	2.81	4.62	7.8	7	13	6	12
1919.....	28.5	74	-22	0.72	0.41	0.66	1.08	0.7	3	12	4	15
1920.....	35.6	77	-10	2.12	1.25	1.49	3.61	2.3	5	13	7	11
1921.....	36.9	74	-8	1.97	1.26	2.00	2.65	1.9	6	13	7	11
1922.....	36.3	75	-6	2.27	0.75	1.71	4.35	0.2	6	15	6	10
1923.....	41.0	82	-4	3.07	1.63	2.96	4.62	0.8	8	11	6	14
1924.....	27.7	80	-28	3.48	2.94	3.45	4.06	4.6	7	13	6	12
1925.....	31.6	69	-10	1.43	1.53	1.27	1.50	4.8	4	13	7	11
1926.....	32.6	75	-12	2.16	1.17	2.12	3.20	2.4	6	11	5	15
1927.....	29.9	74	-11	2.81	1.64	2.55	4.23	2.9	6	15	5	11
1928.....	36.2	81	0	2.29	1.37	2.49	3.00	1.4	5	14	6	11
1929.....	35.2	76	-9	1.74	0.67	1.11	3.43	3.7	6	13	5	13
1930.....	34.2	70	2	1.24	0.79	1.35	1.57	1.9	5	15	6	10
1931.....	42.7	80	11	2.71	2.53	1.51	4.10	1.7	8	11	6	14
1932.....	31.2	77	-21	4.74	3.18	4.98	6.07	5.7	7	12	6	13
1933.....	39.1	78	-7	1.92	1.52	1.67	2.56	0.4	5	12	7	12
1934.....	31.6	69	-3	1.80	0.94	1.72	2.74	5.0	7	10	6	15
1935.....	30.7	66	-11	1.20	0.85	1.03	1.73	2.8	6	11	7	13
1936.....	38.4	69	-7	2.83	2.19	2.71	3.60	2.2	7	12	7	12
1937.....	32.0	66	-2	2.24	1.50	1.90	3.32	0.6	9	8	6	17
Period.....	34.0	83	-29	2.17	1.52	2.05	2.93	3.4	6	13	6	12



## Climatological Data for December 1937

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches				Number of days				Prevailing direction of wind	Observers		
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelted	With precip., .01 inch or more	Clear	Partly cloudy			Cloudy	
Northern Division																					
Bethany.....	Harrison.....	916	42	27.9	- 2.2	54	31	0	8†	30	0.86	-0.29	0.38	1.0	6	11	8	12	nw.	A. S. Cumming	
Brunswick.....	Chariton.....	652	56	29.6	- 1.0	59	31	4	9	36	1.21	-0.46	0.29	T.	6	11	2	18	nw.	O. K. Benecke	
Chillicothe.....	Livingston.....	779	28	27.8	- 2.1	56	31	2	8†	34	0.71	-0.71	0.54	0.5	2	11	3	17	nw.	Wm. J. Olenhouse	
Chilton Hill.....	Randolph.....	731	38	28.4	- 2.6	55	30†	2	8	25	1.86	+0.14	....	0.5	7	6	5	20	sw.	Dr. A. J. Bradsher	
Columbia.....	Boone.....	740	47	31.5	- 1.7	58	31	5	6	25	1.78	-0.08	1.14	0.5	9	6	6	19	w.	U. S. Weather Bureau	
Conception.....	Nodaway.....	980	48	27.0	- 2.2	53	31	- 2	8†	27	0.55	-0.33	0.41	0.5	2	7	14	10	nw.	Fr. Adelhelm Hess	
Downing.....	Schuyler.....	876	16	26.0 <sup>a</sup>	- 3.6	....	....	- 1	1	6†	29	1.02	-0.44	....	1.0	6	6 <sup>d</sup>	5 <sup>d</sup>	16 <sup>d</sup>	n.	Everett Rowe
Edgerton.....	Platte.....	856	17	29.5	- 0.9	56	31	1	10	30	1.36	+0.24	0.79	0.2	5	12	0	19	n.	Fred L. Stiff	
Elsberry.....	Lincoln.....	449	6	30.8	....	58	31	5	6	24	1.91	....	0.55	1.0	10	6	5	20	n.	Ray E. Mills	
Fayette.....	Howard.....	690	57	30.4	- 0.7	56	31	1	8	30	2.26	+0.60	1.24	2.0	6	9	3	19	s.	Harry P. Mason	
Fulton.....	Callaway.....	818	49	30.9	- 2.6	58	30†	5	6	29	1.49	-0.52	0.77	0.5	10	7	10	14	w.	Clyde C. Herrling	
Gorli.....	Scotland.....	700	50	....	....	....	....	- 1	....	....	1.50	+0.10	0.46	3.0	8	12	4	15	nw.	W. L. Harker	
Grant City.....	Worth.....	1,134	33	27.0	- 1.0	52	31	- 1	8†	26	0.57	-0.49	0.39	1.4	7	6	9	16	nw.	Howard Rybolt	
Hannibal.....	Marion.....	759	45	28.9	- 2.6	53	31	2	6†	27	2.00	+0.46	0.93	0.1	7	7	2	22	nw.	Hannibal Water Dept.	
Kansas City.....	Jackson.....	741	48	31.2	- 1.3	59	30	4	8	23	0.95	-0.38	0.81	0.5	8	7	9	1	21	sw.	U. S. Weather Bureau
Kansas City University.....	Jackson.....	908	0	31.3	....	59	30	4	8†	25	1.04	....	0.60	1.0	8	10	6	15	nw.	University of Kansas City	
Kidder.....	Caldwell.....	1,020	45	28.4	- 0.8	55	31	1	8	25	1.28	+0.01	0.57	0.7	7	7	10	14	nw.	Roscoe L. Terry	
King City.....	Gentry.....	1,095	11	....	....	....	....	....	....	....	0.53	-0.55	0.38	T.	4	2 <sup>k</sup>	4 <sup>k</sup>	14 <sup>k</sup>	se.	John M. Martin	
Kirksville.....	Adair.....	969	48	26.6 <sup>b</sup>	- 3.0	55	31	0	8	35	0.76	-1.00	....	2.0	7	5 <sup>b</sup>	9 <sup>b</sup>	15 <sup>b</sup>	nw.	Charles Noble	
Lawson.....	Ray.....	1,050	0	29.2	....	55	30†	1	8	26	1.14	....	0.67	1.7	11	9	5	17	nw.	Elmer E. Lamb	
Linn.....	Linn.....	816	5	....	....	....	....	....	....	....	1.02	....	0.58	1.0	7	8	6	17	nw.	H. D. Taggart	
Louisiana.....	Pike.....	469	43	29.0	- 2.8	55	31	4	6	25	2.45	+0.55	....	1.0	8	5	12	14	w.	Stark Bro's Nurseries	
Macon.....	Macon.....	875	38	27.8	- 2.3	57	30	1	6†	32	1.46	-0.18	0.41	0	5	12	3	16	w.	W. C. Brown	
Maryville.....	Nodaway.....	1,169	47	26.6	- 0.2	51	31	- 2	8	27	0.64	-0.44	0.29	0.9	11	8	4	19	nw.	R. B. Montgomery	
Mexico.....	Adair.....	800	48	29.6	- 2.2	56	30	3	6†	36	1.76	-0.15	0.75	1.0	10	14	0	17	w.	Mrs. Abbie Snoddy	
Moberly.....	Randolph.....	875	0	29.0	....	54	30	1	6†	30	1.91	....	0.96	0.8	8	7	4	20	w.	McCormick Hospital	
Oregon.....	Holt.....	1,048	81	28.1	- 0.6	52	31	- 2	8	25	1.23	+0.19	0.50	0.5	7	10	12	9	uw.	Miss Mina Wright	
St. Charles.....	St. Charles.....	520	49	30.7	- 4.2	58	3†	6	6	28	3.85	+2.06	1.03	4.2	9	8 <sup>a</sup>	9 <sup>a</sup>	13 <sup>a</sup>	nw.	Martin L. Comann	
St. Joseph.....	Buchanan.....	957	27	29.0	- 0.6	55	30	2	8	24	0.75	-0.54	0.54	1.1	9	9	8	14	nw.	U. S. Weather Bureau	
Steffensville.....	Lewis.....	650	39	28.4	- 2.2	54	31	1	8	28	1.32	-0.37	0.75	1.5	7	8	7	16	w.	Frank Hall	
Tarkio.....	Atchison.....	916	34	26.0	- 0.4	51	31	- 2	9	27	0.98	+0.02	0.30	T.	7	8	9	14	nw.	Albert Volker	
Trenton.....	Grundy.....	822	41	29.0	- 0.6	56	30	1	8†	32	1.23	-0.18	0.38	2.5	10	8	6	17	s.	W. H. Estes	
Unionville.....	Putnam.....	1,062	44	26.6	- 1.0	55	30	- 2	8	35	0.86	-0.85	0.42	0.7	5	8	1	22	n.	John H. Schick	
Warrenton.....	Warren.....	816	55	30.6	- 1.8	56	31	3	6	24	2.94	+0.86	0.67	1.5	14	5	3	23	nw.	Prof. A. W. Ebeling	
Keokuk, Iowa.....	Lee, Ia.....	574	66	28.0	- 1.6	56	31	2	8	23	1.90	-0.04	0.84	0.9	13	4	6	21	sw.	U. S. Weather Bureau	
Division means and extremes		28.8	- 1.7	59	30†	- 2	8†	36	1.50	-0.02	1.24	1.0	8	8	6	17	nw.				
Southwestern Division																					
Appleton City.....	St. Clair.....	813	42	32.4	- 2.2	58	30	5	9†	33	1.39	-0.20	0.78	T.	7	11	0	20	nw.	Rolla Brown	
Bolivar.....	Polk.....	1,071	43	31.2	- 1.4	60	30	4	9	28	1.71	-0.63	0.56	0.1	9	8	7	16	nw.	Southwest Baptist College	
Boonville.....	Cooper.....	650	61	31.4	....	58	30†	4	8	26	1.69	-0.01	1.08	2.0	6	8	8	15	w.	Boonville Water Dept.	
Clinton.....	Henry.....	765	44	32.3	- 2.4	59	30	3	10	31	1.11	-0.76	0.85	T.	6	....	....	....	....	U. S. Weather Bureau	
Dean H.....	McDonald.....	1,000	33	36.5	- 1.0	60	29†	0	9	39	2.41	+0.06	0.74	1.0	8	11	3	17	w.	E. S. Taylor	
Eldon.....	Miller.....	934	42	31.4	- 2.9	62	31	5	7	33	0.84	-0.92	0.38	0.5	10	1	15	15	sw.	E. H. Shepherd	
Garber.....	Taney.....	950	2	35.2	....	66	30	0	10	38	3.86	....	1.37	0.5	12	6	4	21	uw.	William H. Durham	
Harrisonville.....	Cass.....	904	59	28.0	- 3.3	58	30	2	10†	29	0.80	-0.65	0.41	0.5	5	8	4	19	nw.	John H. Patterson	
Jefferson City.....	Cole.....	557	47	29.6	- 3.3	59	30	4	6†	33	1.96	+0.02	0.94	0.5	10	5	11	15	e.	Mrs. Frank Kliegel	
Lakeside.....	Miller.....	595	6	32.9	....	61	30	8	6†	34	1.44	....	0.63	T.	11	....	....	....	nw.	W. S. Frame	
Lamar.....	Barton.....	980	49	33.6	- 1.6	59	30	3	9†	34	1.26	-0.62	0.35	T.	7	9	5	17	nw.	Jesse A. Mann	
Lebanon.....	Laclede.....	1,265	49	33.4	- 1.4	60	30	4	9†	30	2.68	+0.40	0.80	0.2	9	6	8	17	se.	Mrs. Rosa E. Montelius	
Lexington.....	Lafayette.....	688	52	30.2	- 1.8	58	30	3	8	33	1.13	-0.46	0.35	1.0	8	9	12	10	w.	Miss Carrie Loomis	
Lockwood.....	Dade.....	1,078	31	34.6	- 1.5	59	30	4	10	27	1.56	-0.58	0.54	1.5	8	10	5	16	nw.	Hubert A. Nieman	
Marshall.....	Saline.....	779	50	31.8	- 0.1	58	30	4	8	28	1.25	-0.50	0.75	0	5	12	6	13	sw.	Sec. Chamber of Commerce	
Mountain Grove.....	Wright.....	1,463	36	33.3 <sup>a</sup>	- 1.4	60	27	5	9	30	3.82	+1.41	1.65	0	12	7	11	13	se.	Mo. Fruit Exp. Sta.	
Mount Vernon.....	Lawrence.....	1,174	38	34.1	- 1.4	63	30	3	9†	31	1.83	-0.71	0.43	1.3	9	11	7	13	nw.	G. H. Boswell	
Neosho.....	Newton.....	1,011	50	35.6	- 1.5	59	30	1	9†	34	2.14	-0.14	0.52	0.3	11	10	6	15	sw.	U. S. Fisheries Sta.	
Nevada.....	Vernon.....	862	44	34.2	- 1.1	58	30†	5	10	30	0.95	-0.80	0.60	T.	4	9	5	17	sw.	T. J. Kaupp	
Sedalia.....	Pettis.....	910	17	32.0	- 1.9	59	30	5	6†	29	1.42	+0.14	0.80	1.5	7	9	12	10	n.	Mrs. Laura S. Trader	
Seligman.....	Barry.....	1,542	36	34.9 <sup>e</sup>	- 2.4	60	30	2	9†	28	3.33	+1.13	1.10	1.0	9	11 <sup>a</sup>	5 <sup>a</sup>	14 <sup>a</sup>	w.	Floyd E. Fawver	
Seymour(near).....	Webster.....	1,642	31	33.4	- 2.0	57	30	3	9	27	4.04	+1.78	1.50	0.5	11	7	9	15	nw.	A. L. Hailey	
Springfield.....	Greene.....	1,301	49	33.6	- 2.6	60	30	6	9	26	2.38	+0.07	0.88	1.0	11	7	5	19	nw.	U. S. Weather Bureau	
Versailles.....	Morgan.....	1,037	11	32.6	- 2.8	58	27†	4	6	34	1.42	-0.45	0.60	0.5	11	7	7	17	uw.	I. M. Wilson	
Warrensburg.....	Johnson.....	878	50	31.7	- 1.7	60	30	4	10	25	1.37	-0.17	0.57	0.4	8	9	5	17	nw.	E. A. Markey	
Warsaw.....	Benton.....	687	36	33.2	- 2.5	59	30	3	11	37	1.33	-0.79	0.63	0.5	9	7	3	21	n.	Everett Martin	
Division means and extremes		32.9	- 1.9	66	30	0	9†	39	1.90	-0.15	2.31	0.6	9	8	7	16	nw.				



Daily Precipitation for December 1937

Stations	Drainage-basins	Day of month																															Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Northern Division																																		
Amity	Grand	T.			.09			T.						T.	.48	.41				T.	T.												1.17	
Bellamy	do	.10		.02				T.						T.	.07	.13	.14	.15															0.86	
Bowling Green	Mississippi	.05		.03	.95									T.	.07	.13	.14	.15							.03	T.	T.						1.90	
Brunswick	Grand	.01		.28	.23									T.	.22	.29																	1.21	
Canton	Mississippi		.02	.15	.68			T.						T.	.37	.38	T.																1.72	
Chillicothe	Grand				T.			T.						T.	.17	.54		T.															0.71	
Clifton Hill	Chariton	.30		.49	.10	T.		T.						T.	.05	.20	.21				T.	T.											1.86	
Columbia	Missouri	.04		1.12	.03	T.		T.						T.	.41																		1.78	
Conception	do	T.		T.				T.						T.	.20	.21					T.	T.											0.55	
Downing	Mississippi			.15				T.						T.	.07	.79	.23																1.02	
Edgerton	Missouri	T.		T.				T.						T.	.07	.79	.23																1.36	
Edina	Mississippi		.03	.02	.33		T.	T.						T.	.57	.09																	1.15	
Elsberry	do	.09		.55	.15			T.						T.	.08	.22	.23	.04	.36														1.91	
Farber	do	.28		.10	.74			T.						T.	.03	.08	.30	.12															1.91	
Fayette	Missouri	.10		1.24				T.						T.	.01	.23	.28																2.26	
Fulton	do	.02		.16	.77	T.	T.							T.	.02	.10	.22	.10															1.49	
Gallatin	Grand	T.		.07	T.			T.						T.	.56	.42																	1.14	
Gorin	Mississippi	.06		.46		T.		T.						T.	.10	.44					.05	T.											1.50	
Grant City	Grand	.02		T.				T.						T.	.01	.39	.07				.02	T.											0.57	
Hannibal	Mississippi			.65	.28	T.		T.						T.	.31	.28																	2.00	
Hermann	Missouri	.01		.04	.02	.74		T.						T.	.01	.03	.33	.05	.40														1.85	
Kahoka	Mississippi		T.	.02	.65	.15	T.							T.	.80																		2.03	
Kansas City	Missouri	.04		.01	T.			T.						T.	.01	.78	.05				.01	T.											0.95	
Kansas City University	do	.10		.04		T.		T.						T.	.60	.19																	1.04	
Kidder	Grand	.02		.07	.01			T.						T.	.57	.50																	1.28	
King City	Missouri							T.						T.	.57	.50																	0.53	
Kirksville	Mississippi	.05		.27				.03						T.	.38	.50					.01	T.											0.76	
LaBelle	do		.02	.24	.42									T.	.35	.35					.01	T.											1.40	
Lawson	Missouri	.14		.05	.01			.01						T.	.67	.14																	1.14	
Linneus	Grand	T.		.04	.06	.15		T.						T.	.58	.10																	1.02	
Louisiana	Mississippi	.05		.01	.03			.02						T.	.08	.56																	2.45	
Lucerne	Grand	.05		.01	.03			.02						T.	.22	.41																	0.82	
Macou	Chariton			.40	.22									T.	.17	.25																	1.46	
Madison	Mississippi	.10		.32	.26									T.	.02	.29	.12																1.52	
Maryville	Missouri	.03		T.				.02						T.	.25	.37	T.				.07	T.											0.64	
Memphis	Mississippi	T.	T.	.07	.21			.05	T.					T.	.25	.37	T.																1.22	
Mexico	do	.07		.20	.75			T.						T.	.50	.20																	1.76	
Milan	Grand	.07		.18	.07			.04						T.	.50	.20																	1.18	
Moberly	Mississippi	.07		.18	.07			.04						T.	.50	.20																	1.91	
Monroe City	do	.04		.72	.26									T.	.38																		1.97	
New London	do	.04		.72	.26									T.	.38																		2.08	
Orion	Missouri			.23	.72			.10						T.	.10	.40					.50												1.23	
Palmyra	Mississippi			.23	.72			.10						T.	.10	.40					.50												2.08	
Paris	do	.04		.35	.54									T.	.20	.25																	2.12	
Perry	do	.10		.28	.74									T.	.12	.18	.05																2.03	
Philadelphia	do			.84										T.	.21	.26	.10																1.67	
St. Charles	Missouri		.76		1.03			T.						T.	.12	.65	.90	.20															3.85	
St. Joseph	do	.01		.02	.50	.41		.02						T.	.05	.54	T.				.01	T.											0.75	
Shelbina	Mississippi			.03	.80									T.	.05	.54	T.				.01	T.											1.89	
Shelbyville	do			.03	.80									T.	.05	.54	T.				.01	T.											1.55	
Stouffville	do			.03	.80									T.	.05	.54	T.				.01	T.											1.32	
Tarkio	Missouri			.15	.10	T.		T.						T.	.75	.10																	0.88	
Trenton	Grand	.06		.05	.14	.05		.02						T.	.30																		1.23	
Troy	Mississippi	.03		.01	.09	.76		.03						T.	.11	.38	.36																0.96	
Unionville	Chariton	.11		.05				.02						T.	.01	.06	.09	.26	.04	.35													1.96	
Warrenton	Mississippi	.15	T.	.67	.26	T.	T.							T.	.10	.60	.10	.30	.31														2.94	
Keokuk, Ia.	do	.02		.83	.01	T.		.06						T.	.59	.13					.01	T.											1.90	
Southwestern Division																																		
Altona	Osage			.60										T.	.15																		0.95	
Appleton City	do	T.		.78		T.		.03	.10					T.	.03	.03	.47	.02															1.39	
Bollivar	do			.56				.01						T.	.08	.05	.21	.36	.37														1.71	
Boonville	Missouri	.08		1.08	.03	T.																												



## Daily Precipitation for December 1937—Continued from preceding page

Stations	Drainage-basins	Day of month																															Total			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
Southeastern Div.—Continued																																				
Birch Tree (near).....	Black.....			.04	.11									.08	.11	.05	1.20	1.25	.05														3.76			
Bragg City   .....	St. Francis.....					T.	T.	T.	T.					T.	.24	.05	.32	.70	.48						.26						.33		.28	3.84		
Campbell.....	do.....			.68									.04	.30			.85		.30					.35	.65					.25			.06	3.40		
Cape Girardeau	Mississippi.....			.05			T.							.08	.15		.24	.98	.11					.19	.24	T.						.01	2.19			
Caruthersville	do.....														.20		.50	.67	.65					.48	.61				.15				3.86			
Centerville	Black.....			.11										1.05	.32	.01	.50	1.84	.35	.03				.02						.02		.01	4.47			
Crystal City	Mississippi.....		.04	.53		T.								.10	.02		.61	2.14	.18										.21				4.15			
Cuba	Meramec.....		T.	.22	1.20									.22	.22		.22	.22	.22														4.10			
Dexter	St. Francis.....					T.			T.					.02				.79	.45					.50	T.					.50			4.10			
Doniphan.....	Black.....			T.	.05	T.	.01							.18	.02	T.	.18	.32	.32					.69	T.					.42	.01	T.	.17	3.37		
Farmington.....	St. Francis.....	T.		.20		T.	T.	T.						.12	.21	.14	.07	1.13	.04					.04						.16		.02	3.13			
Fisk	do.....				.07	T.								.04	T.		.06	.99	.19					.11	.53					.22			T.	2.21		
Fredericktown	do.....				T.			.03	T.					T.	.30		.66	1.77	.18						.20					.16			3.30			
Goodland.....	Black.....			.25	.10	T.	.05	T.						.08	.20	.15	1.10	1.42						.05								.09	.07	3.56		
Greenville.....	St. Francis.....													T.	.25	T.		.64	.98					.47						.26		T.		2.60		
Jackson.....	Mississippi.....	T.		.02	.16	T.			T.	T.				.22	.10		.62	1.04	.15					.43						.18			.07	2.99		
Jerome	Gasconade.....				.50			T.	T.					T.	.13	.05	.65	1.27	.06											.32	T.			2.98		
Koshkonong.....	Black.....			.13	.42									T.	.09	.05	.03		2.00											.41			.12	3.76		
Leeper	do.....				.20										.10		.40	1.68	.30					.51						.40			3.48			
Licking (near).....	Gasconade.....			.40	.06				.01						.10		.20	1.30	1.80											.05			3.92			
Marble Hill.....	Mississippi.....				.08			T.						.20	.15		.20	.95	.18					.25						.30		.05	.05	2.41		
Meramec Park	Meramec.....			.04		.43									.10		.71	1.91	.21											.28			3.68			
Morehouse.....	Mississippi.....			.04	T.	T.	T.	T.						T.	.25	.02		.50	1.03	.27										.38			.08	3.29		
New Madrid	do.....			.06	.10	.01			.02					.23	.12		.16	.47	.14											.45	.13		.05	2.12		
Owensville	Gasconade.....	T.		.11	.51									T.	.13	.23	.33	.89	.35											.09				2.64		
Parma	St. Francis.....					.81											.75	1.25	.32											.59	.24			4.70		
Poplar Bluff	Black.....			.03		T.								.16	.08		.12	.92	.25						.55	.16	.02			.61	T.		T.	2.90		
Richwoods	Meramec.....			.30													.84	.80	1.20											.62			T.	3.44		
Rolla.....	do.....	.05		.46	.09	T.	.01	T.						T.	.09	.06	.26	.88	1.28											.30			T.	3.58		
St. Louis***	Mississippi.....	.04		.76	T.	T.	T.	T.						.02	.13	.04	.33	.94	1.19											.35	T.	T.	T.	.03	3.91	
St. Louis Airport*	Missouri.....	.14		.77	T.	T.	T.	T.							.08	.11	.40	.41	.99											.03	.08	.01	T.	.02	.01	3.05
St. Louis University*	Mississippi.....	.02		.75		T.		T.							.17		.42	.79	1.19															T.	.03	3.65
Salem.....	Meramec.....			.30			T.							T.	.09	.11	.22	1.21	2.04											.01	T.			.11	4.20	
Sikeston	Mississippi.....			.10					.03						.18			.20	1.31	.10										.25			.10	3.37		
Union.....	Meramec.....			.39	.25										.09	.09	.45	.45	1.19											.58			.02	3.21		
Valley Park	do.....	T.	.03	T.	.75	T.			T.	T.				.04	.03	T.	.40	1.25	.65											.46			T.	3.61		
Van Buren.....	Black.....				.21	T.								T.	.22	.11	.30	1.00	.64											.34	T.	T.		2.92		
West Plains.....	do.....			.07	.09	T.			T.	T.					.05	.06	.03	.96	1.45	T.										.28			T.	3.16		
Williamsville	do.....			.07			.01								.09	.16	.01	.18	1.27	.33										.36	.13			.03	2.86	
Willow Sprgs. (near)	White.....								.02						.07	.16		.54	2.22											.24	.01	.01		.14	3.41	
Zalma	Mississippi.....														.20	.20		.24	.97	.23										.31				.26	2.56	
Cairo, Ill.***	do.....	T.		T.	.06	.01	T.	.04						.01	.21		.02	1.23	.46	T.										.49	T.	T.	T.	.02	.34	3.04

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. ||| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. T. Trace, or less than 0.01 inch.  
 \*\*\* Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. \*\* Precipitation in the next following measurement; separate dates of fall not recorded. \* Precipitation is for 24-hour period, midnight to midnight † Estimated. ‡ Partially estimated. |||| Incomplete.

Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for December 1937  
 (See precipitation data in table on preceding page)

Station	Data	Day of month																															Monthly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Lakeside..... (Osage Dam)	{ Evaporation .....	.026	.039	.048	†††	†††	†††	†††	†††	†††	†††	†††	†††	†††	†††	†††	†††	†††	†††	†††	†††	†††	†††	†††	†††	†††	†††	†††	†††	†††	†††	†††	.....
	{ Mean temperature .....	37	37	34	40	20	18	21	16	19	20	20	23	32	33	34	40	34	36	35	34	42	42	34	38	35	32	36	34	42	48	54	32.9
	{ Wind movement .....	68	57	80	86	174	163	82	159	171	111	89	59	79	67	55	55	67	64	36	91	108	163	59	72	92	49	67	52	53	31	84	2,643

Observations taken at 7.30 a. m. Wind movement corrected to true velocities. For description see April 1932 report.

\*\*\* Evaporation included in next measurement. ††† — .019.

Continued from page 58

MISCELLANEOUS PHENOMENA

Fog.—Dense, 1st, 2d, 3d, 4th, 13th, 14th, 15th, 16th, 17th, 18th, 19th, 23d, 24th, 26th, 27th, 28th, 29th, 30th, 31st.

Glaze.—12th, 13th, 14th, 15th, 17th, 19th, 23d, 24th, 27th, 28th, 29th.

Halos.—Solar, 3d, 17th, 18th; lunar, 12th, 14th, 15th, 16th, 17th, 19th.

Sleet.—12th, 13th, 14th, 15th, 16th, 17th, 18th, 26th.

Smoke.—Dense, 11th.

Thunderstorms.—Locally on 26th.

Windstorms.—No damaging winds reported.

ERRATA

November 1937, page 53: Total snowfall at Marshall should 5.5; average snowfall for Southwestern Division should be 5.3; Mexico, number of days clear, partly cloudy, and cloudy should be 22, 0, and 8 respectively; Trenton, date of minimum temperature should be 21st.



## Daily Temperatures for December 1937

Stations		Day of month																															Mean	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Northern Division																																		
Bethany	Maximum	39	44	42	43	28	24	33	23	17	24	24	26	34	30	32	33	44	38	34	38	44	42	40	41	35	43	37	38	36	50	54	35.8	
Bethany	Minimum	26	14	38	28	8	2	14	0	0	0	2	14	24	23	28	19	21	22	29	24	22	24	25	25	19	19	33	19	27	35	35	20.0	
Brunswick §§	Maximum	36	49	43	37	18	25	38	16	23	25	26	45	34	32	34	35	37	39	36	31	49	44	40	41	32	45	43	32	47	56	59	37.0	
Brunswick §§	Minimum	23	24	24	33	17	6	6	6	4	6	6	9	23	28	28	29	30	25	24	28	26	31	23	22	24	21	23	30	30	40	45	22.1	
Chillicothe §§	Maximum	38	47	43	34	27	24	37	15	21	24	26	37	35	32	38	35	41	33	35	32	46	43	37	34	35	45	42	39	49	51	56	36.5	
Chillicothe §§	Minimum	15	14	22	29	11	3	3	2	2	2	4	8	25	24	29	24	28	21	24	25	23	32	39	20	21	19	23	33	29	30	27	19.1	
Clifton Hill	Maximum	39	42	42	42	31	16	27	27	17	19	24	31	30	30	32	32	32	32	33	33	42	42	35	32	31	41	42	36	38	55	55	34.2	
Clifton Hill	Minimum	27	23	36	30	14	3	14	2	3	3	5	17	25	25	29	27	23	22	25	25	25	33	21	30	24	21	34	28	29	37	43	22.7	
Columbia	Maximum	40	49	42	43	29	19	35	17	22	26	28	34	31	33	35	42	36	40	36	35	51	44	42	45	39	46	42	34	45	58	58	37.9	
Columbia	Minimum	27	24	38	29	12	5	15	7	8	8	9	25	26	25	33	32	30	26	28	28	30	30	33	28	27	24	34	29	32	44	42	25.1	
Conception	Maximum	38	45	45	42	23	22	31	16	17	23	25	33	33	27	34	35	43	39	36	27	45	39	33	33	35	43	37	31	43	50	53	34.7	
Conception	Minimum	25	18	37	23	5	0	16	-2	-2	0	5	16	26	21	26	19	19	24	26	21	20	30	18	18	18	22	30	26	26	34	35	19.4	
Downing	Maximum	41	43	42	41	28	21	35	23	20	25	23	31	30	33	34	34	37	33	33	43	43	44	39	31	44	41	40	40	40	40	40	34.1	
Downing	Minimum	16	14	33	26	7	-1	14	-1	1	2	5	18	23	22	27	25	27	23	25	23	22	22	21	24	21	31	25	21	21	21	21	18.0	
Edgerton	Maximum	34	47	47	45	30	25	38	20	21	27	28	33	32	35	39	43	42	36	40	46	42	53	36	36	36	36	31	38	31	41	55	56	36.9
Edgerton	Minimum	27	17	40	29	10	4	18	2	3	1	2	20	26	24	30	23	24	22	28	24	21	24	31	25	22	21	21	21	21	21	21	21	
Elsberry	Maximum	36	33	38	43	32	21	34	32	25	28	27	32	32	31	35	40	39	34	33	34	48	48	36	50	39	43	44	41	35	52	58	37.2	
Elsberry	Minimum	29	21	27	31	14	5	11	8	7	8	8	16	27	26	31	32	31	25	27	30	28	35	20	33	25	22	36	34	29	34	44	24.3	
Fayette	Maximum	39	48	43	45	33	16	32	16	20	22	22	34	28	31	34	41	38	38	34	32	48	52	36	42	38	51	38	36	49	55	56	36.7	
Fayette	Minimum	28	19	34	30	15	2	16	1	4	5	6	21	28	24	31	30	28	26	26	27	25	34	21	36	26	21	36	29	31	40	45	24.0	
Fulton§§	Maximum	37	49	43	41	19	24	30	17	24	27	27	32	33	37	44	35	43	36	36	53	46	43	47	39	40	43	34	47	58	58	38.0		
Fulton§§	Minimum	27	20	29	37	16	5	6	7	7	8	6	11	27	26	29	33	31	26	27	29	36	23	27	27	22	31	30	30	30	47	23.8		
Grant City	Maximum	39	44	43	43	27	23	32	13	18	23	25	34	32	32	33	37	44	38	34	29	45	41	33	33	34	42	38	32	39	48	52	34.7	
Grant City	Minimum	25	19	38	27	6	0	13	-1	1	0	0	18	24	22	27	18	18	20	27	22	19	30	18	18	19	19	19	19	19	19	19	19	
Hannibal	Maximum	36	39	41	42	28	19	32	29	22	25	23	32	31	30	32	32	32	32	33	33	47	43	35	41	32	44	44	36	36	50	53	35.1	
Hannibal	Minimum	27	21	32	27	9	2	13	2	4	6	7	22	25	24	29	30	29	24	26	26	27	32	17	31	20	23	34	41	50	58	35.1		
Kansas City	Maximum	37	52	48	45	24	25	36	17	21	25	32	35	31	31	36	37	40	43	37	31	48	43	40	43	38	43	40	34	50	59	58	38.0	
Kansas City	Minimum	28	32	43	24	11	0	13	4	6	6	9	23	25	25	31	30	28	26	30	27	30	28	28	42	22	24	31	29	29	37	24.4		
Kansas City Univ.	Maximum	38	52	47	45	31	23	36	21	20	25	31	34	33	30	36	40	41	42	38	31	48	42	38	41	38	42	38	33	48	59	57	38.0	
Kansas City Univ.	Minimum	28	27	42	31	11	6	18	4	6	4	9	22	27	25	30	30	28	25	30	28	25	35	26	24	21	23	33	28	28	47	42	24.6	
Kidder	Maximum	38	46	43	43	29	21	35	19	18	23	25	33	32	30	33	34	38	39	36	29	43	39	34	36	34	43	39	33	37	53	55	35.2	
Kidder	Minimum	23	21	37	28	9	3	18	1	2	3	7	17	25	23	29	24	25	23	28	23	31	21	22	22	32	28	27	34	37	47	21.6		
Kirksville	Maximum	36	44	41	41	27	20	33	21	20	24	24	33	30	30	32	36	33	33	33	32	44	41	33	37	27	27	27	27	27	27	27	27	
Kirksville	Minimum	13	9	34	26	9	1	13	0	2	3	5	12	23	22	28	27	28	23	25	24	23	15	27	17	17	17	17	17	17	17	17	17	
Lawson	Maximum	34	48	45	42	30	23	32	21	20	25	27	33	32	29	34	38	41	42	36	29	41	43	35	39	35	43	37	33	45	55	55	36.3	
Lawson	Minimum	27	22	40	29	10	3	16	1	2	2	9	18	25	23	29	25	26	25	25	25	27	38	18	35	25	20	35	30	35	50	55	34.5	
Louisiana	Maximum	36	35	40	38	30	17	30	30	22	25	30	30	30	30	35	40	32	31	27	30	50	40	40	40	40	40	40	40	40	40	40	40	
Louisiana	Minimum	27	20	28	29	10	4	10	6	6	9	11	16	25	27	30	30	28	25	25	27	38	18	35	25	20	35	30	35	50	55	34.5		
Macon§§	Maximum	38	47	42	36	16	24	35	16	22	24	25	33	31	32	33	35	30	34	33	46	43	41	44	32	46	41	32	47	57	52	35.6		
Macon§§	Minimum	18	23	24	32	12	1	3	1	1	3	4	9	23	23	28	28	27	21	24	28	17	17	17	17	17	17	17	17	17	17	17	17	
Maryville	Maximum	39	44	44	43	25	19	27	14	17	22	26	31	31	28	32	32	40	38	34	27	46	40	31	29	40	41	36	32	42	46	51	33.8	
Maryville	Minimum	23	20	38	25	6	-1	14	-2	1	0																							



Stations		Day of month																															Mean
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
<i>Southwestern Division—Concluded</i>																																	
Neosho.....	Maximum...	48	56	53	44	36	26	35	31	20	25	38	41	39	54	39	44	44	48	47	45	54	50	46	46	38	49	58	54	56	59	58	44.5
	Minimum...	23	26	38	34	18	8	13	13	1	1	9	31	31	34	32	31	31	20	25	18	20	39	30	33	31	26	47	24	31	50	52	26.8
Nevada.....	Maximum...	39	57	47	45	37	25	34	30	24	28	36	35	35	32	36	45	45	47	43	40	55	46	47	47	40	45	47	46	52	58	58	42.0
	Minimum...	28	27	40	26	15	8	17	9	6	5	12	27	31	29	31	34	34	25	29	23	25	42	25	27	26	24	41	32	35	48	37	26
Sedalla.....	Maximum...	37	54	48	43	32	23	35	34	23	29	29	34	33	32	33	42	39	44	40	33	50	48	38	44	32	45	40	39	45	59	58	39
	Minimum...	29	25	39	31	14	5	15	5	6	5	8	21	29	26	30	32	28	24	29	24	26	34	25	30	25	20	36	29	32	43	44	24.8
Seligman.....	Maximum...	48	48	45	43	35	25	35	29	20	26	37	..	37	47	48	45	45	50	50	44	47	45	44	49	..	..	55	54	52	60	57	*43.6
	Minimum...	28	24	32	31	16	5	16	9	2	2	10	..	28	33	31	33	28	22	30	19	28	35	33	38	..	..	33	43	24	47	44	*26.2
Seymour(near).....	Maximum...	45	46	44	41	32	19	34	28	22	25	32	31	35	40	45	46	44	42	46	40	50	48	40	46	46	40	54	49	55	57	56	41.2
	Minimum...	26	20	31	31	15	5	10	10	3	6	6	24	28	31	33	35	30	26	28	25	25	37	30	36	33	26	37	28	28	40	47	25.0
Springfield.....	Maximum...	43	49	41	42	26	20	33	19	20	23	32	34	39	44	44	44	37	45	45	37	52	45	41	45	38	43	52	50	47	60	58	40.3
	Minimum...	29	28	35	26	12	7	18	8	6	7	14	28	32	33	32	37	30	27	31	25	26	34	32	32	32	31	38	32	33	44	39	27.0
Versailles.....	Maximum...	38	54	46	42	32	24	33	30	24	29	30	33	33	31	34	46	40	50	47	37	52	47	35	46	44	43	58	42	42	58	58	40.6
	Minimum...	28	20	38	32	14	4	13	6	6	6	6	21	29	26	31	34	34	29	24	26	25	26	35	24	30	26	21	38	30	33	40	46
Warrensburg.....	Maximum...	38	51	47	42	32	23	36	26	22	28	32	35	34	30	35	40	40	44	39	34	51	45	39	43	34	44	39	37	45	60	57	38.8
	Minimum...	29	26	39	32	13	6	16	5	6	4	9	21	27	23	30	30																

\* , b , c , etc., indicate respectively 1, 2, 3, etc., days missing from the record. §§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs. ¶ Estimated. WBO, St. Louis, 1-25-37-1055.



57.05  
WMS  
41  
10.13

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

# CLIMATOLOGICAL DATA

19  
**MISSOURI SECTION**  
ROSCOE NUNN  
ST. LOUIS, MO.  
VOL. XLI ANNUAL SUMMARY 1937 No. 13  
PRICE: 5 CENTS A COPY; 25 CENTS A YEAR

## GENERAL SUMMARY

Details of the weather of 1937 in Missouri are given in the monthly reports, "Climatological Data," issued from the St. Louis office of the Weather Bureau. In this present brief review mention should be made of some of the principal events of the year, including the following: In January, the low temperatures in the northern half of the State, the sleet and ice storms, and the excessive rainfall and floods in the lower southeastern section; the February windstorms; the persistent unseasonably cold weather of the last three weeks of March, with heavy snowfall on the 12-13th in central sections; the wind and hail storms of April and May; the persistent high temperatures and deficient rainfall in August; the brief hot periods in September; the unusually early hard freezing in October; the very high temperatures the first day of November and the very cold period of November 16th-23d, with heavy snow in central and southwestern sections; the severe cold of the first 12 days of December.

The State average temperature for the year was slightly below normal, for the first time since 1929, and this relation to normal was pretty much the same in all sections. Mid-summer temperatures (July) ranged very near normal.

Precipitation for the year was decidedly less than normal in the Northern and Southwestern divisions and considerably more than normal in the Southeastern Division, especially in the lower southeastern counties.

Moisture conditions were generally satisfactory for agriculture during the spring and early summer, but in July rainfall became markedly irregular in distribution, and moisture became deficient over a belt extending from Pike, Lincoln, St. Charles, and St. Louis counties westward to Jackson and Cass counties. In August rainfall was decidedly less than normal almost generally, and corn began to suffer from heat and lack of moisture in most parts of the State. Lack of rainfall continued during September in most parts of the northern and central sections, resulting in damage to late corn, alfalfa, pastures, gardens, and apples.

These conditions of deficient moisture were not materially relieved in October, and in the northern and western sections large areas were badly in need of rain for wheat and other grains and pastures. Wheat had not germinated well in many fields in the dry areas, and the crop generally was unusually backward at the end of October. Farm water supplies were very low or exhausted in some localities.

November was the fourth successive month with deficient precipitation in northern and western sections and December brought no material improvement, so that the year ended with severe depletion of subsoil moisture in large parts of northern and west-central Missouri. In the southeastern quarter moisture conditions were generally satisfactory.

## TEMPERATURE

The annual mean temperature for the State was 54.5°, or 0.5° below normal. The highest annual mean was 59.1° at Campbell and Caruthersville, and the lowest annual mean was 50.1° at Unionville. The highest temperature recorded was 105° at Oregon on June 25th, Lamar on July 5th, Marble Hill

on August 9th, and Garber on August 10th, and the lowest was 15° below zero at Louisiana on January 23d and at Fulton on February 2d. The greatest daily range was 57° at Mexico on (Continued on page 68)

## CONDENSED STATE SUMMARY FOR 1937

Month	Temperature				Precipitation				
	Mean	Departure from Normal	Maximum	Minimum	Mean	Departure from Normal	Greatest	Least	No. Days with .01 or more
January	28.5	-2.3	70	-15	6.38	+3.99	16.61	2.16	11
February	32.4	-0.5	74	-15	1.38	-0.67	2.80	0.38	6
March	40.4	-3.4	77	6	1.66	-1.57	3.92	0.54	6
April	54.5	-0.7	83	21	4.04	+0.13	7.95	1.22	10
May	66.2	+1.8	98	24	3.86	-0.89	6.74	1.04	9
June	74.4	+0.8	105	43	4.93	+0.31	10.46	1.55	10
July	77.9	+0.1	105	45	4.06	+0.37	10.90	0.67	8
August	80.5	+4.1	105	51	2.05	-1.75	6.10	0.34	5
September	69.4	+0.2	103	29	2.41	-1.74	12.37	0.21	5
October	56.3	-1.0	98	15	2.44	-0.47	7.12	0.65	7
November	41.0	-3.3	90	-7	1.85	-0.79	3.39	0.62	7
December	32.0	-2.0	66	-2	2.24	+0.07	4.70	0.53	9
Year	54.5	-0.5	105	-15	37.30	-3.01	16.61	0.21	93

## COMPARATIVE ANNUAL DATA FOR MISSOURI

Year	Temperature			Precipitation					Number of days			
	Average for State	Highest	Lowest	Average for State	Average Northern Division	Average Southwestern Division	Average Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy
1888	52.9	111	-32	40.40	39.67	41.36	40.17	81	81	.....	.....	.....
1889	54.3	107	-9	38.19	36.97	40.35	37.26	85	85	.....	.....	.....
1890	54.7	110	-19	39.51	31.07	42.08	45.39	82	82	.....	.....	.....
1891	53.9	104	-13	37.18	37.28	37.71	36.54	93	93	.....	.....	.....
1892	52.8	102	-31	44.77	41.62	47.88	44.80	92	141	95	130	.....
1893	52.7	107	-20	39.17	35.42	38.99	41.68	77	155	117	93	.....
1894	55.1	111	-35	34.61	26.97	38.27	38.58	15.4	73	170	120	75
1895	52.9	106	-26	40.03	36.74	43.42	39.92	23.7	85	161	108	96
1896	55.5	108	-10	40.37	39.65	39.79	41.68	12.6	86	154	111	101
1897	55.0	108	-16	40.56	35.18	37.46	49.03	19.5	86	167	104	94
1898	54.4	104	-20	54.26	51.87	54.12	56.80	18.6	102	162	102	101
1899	54.0	108	-32	37.93	36.34	36.81	40.64	28.8	82	166	110	89
1900	55.6	105	-16	39.00	35.73	39.57	41.70	18.5	90	171	106	88
1901	55.5	116	-29	25.86	23.36	26.56	27.66	19.2	72	190	98	77
1902	54.1	103	-17	45.01	42.71	48.98	43.33	16.7	103	159	103	103
1903	53.6	102	-25	40.63	38.78	42.79	40.31	16.5	96	170	96	99
1904	53.2	100	-23	42.06	41.59	42.43	42.16	18.8	89	180	99	87
1905	53.6	103	-40	47.00	39.82	51.84	49.35	22.3	87	174	91	100
1906	55.0	101	-13	39.43	30.26	38.78	49.25	28.2	98	165	89	111
1907	55.4	109	-15	40.91	37.01	41.92	43.81	12.8	95	173	82	110
1908	56.8	102	-10	43.81	37.66	47.24	46.54	9.7	91	184	92	90
1909	55.8	110	-20	45.27	44.94	42.95	47.32	18.3	92	173	90	102
1910	54.6	109	-24	37.81	31.96	37.99	43.48	17.2	82	183	81	101
1911	56.7	113	-19	37.43	38.04	37.92	36.33	15.2	88	166	86	113
1912	53.5	105	-36	38.99	32.53	38.82	45.62	39.6	81	192	80	94
1913	56.5	110	-12	38.20	33.14	35.96	45.50	26.0	87	174	80	111
1914	56.1	109	-18	34.68	32.21	36.43	35.41	26.4	81	171	86	108
1915	55.0	102	-24	49.84	48.57	51.74	49.22	25.3	98	160	86	119
1916	55.3	109	-29	40.62	38.58	41.08	42.19	18.2	87	191	77	98
1917	52.6	107	-23	32.21	28.70	31.92	36.01	13.9	80	186	83	96
1918	55.4	111	-25	37.69	32.60	37.19	43.29	27.2	84	185	80	100
1919	55.3	106	-23	40.27	36.73	40.46	43.62	10.2	86	181	81	103
1920	54.3	105	-10	37.56	33.62	38.66	40.40	15.4	89	171	82	113
1921	58.2	109	-8	44.70	39.16	46.40	48.54	11.1	92	173	88	99
1922	56.8	108	-6	39.68	37.50	41.64	39.90	8.2	85	192	80	93
1923	55.3	108	-11	42.18	33.43	42.47	50.64	8.6	98	165	88	112
1924	53.0	106	-28	40.03	35.28	44.39	40.41	28.3	92	173	91	102
1925	55.6	110	-15	39.15	38.83	36.81	41.82	16.4	84	171	84	100
1926	54.5	108	-20	42.92	42.35	43.85	42.57	23.2	95	160	86	119
1927	55.6	102	-24	55.53	42.03	59.85	64.70	13.4	101	163	91	111
1928	55.2	102	-18	45.88	41.22	46.01	50.40	6.8	90	174	94	98
1929	53.5	105	-23	46.72	44.13	45.56	50.48	22.3	102	155	93	117
1930	55.9	114	-31	31.38	26.71	34.90	32.53	17.6	75	194	84	87
1931	58.0	110	-5	40.31	41.10	38.85	40.97	14.2	93	175	82	108
1932	56.6	109	-21	38.24	35.88	36.74	42.09	16.0	85	178	93	95
1933	57.3	108	-22	37.62	29.65	37.05	46.16	8.0	86	175	95	95
1934	57.4	117	-26	35.08	30.66	34.92	39.66	23.0	82	187	89	89
1935	55.0	110	-12	48.04	42.33	49.12	52.66	5.0	106	144	89	132
1936	56.3	118	-25	29.42	26.48	30.03	31.73	15.8	73	196	86	84
1937	54.5	105	-15	37.30	29.85	36.16	45.89	15.3	93	160	96	109
Period	55.0	118	-40	40.31	36.48	41.08	43.36	17.9	88	172	92	101



## Climatological Data for Year 1937

Stations	Counties	Elevation, feet	Temperature (Degrees Fahrenheit)						Precipitation (inches)						Number of days					Prevailing direction of wind
			Length of record, years	Annual mean	Highest	Date	Lowest	Date	Length of record, years	Total	Greatest monthly	Month	Least monthly	Month	Total snowfall	With precip. .01 inch or more	Clear	Partly cloudy	Cloudy	
Northern Division																				
Bethany	Harrison	916	43	51.2	101	Sept. 22	- 6	Nov. 21	45	23.58	5.15	July	0.51	Sept.	8.6	64	210	76	79	nw.
Brunswick	Chariton	652	57	52.8	102	June 25	- 2	Jan. 9†	59	32.17	5.17	July	1.14	Sept.	19.2	88	180	39	146	nw.
Chillicothe	Livingston	779	29	51.8	103	June 25	- 2	Jan. 9†	32	31.47	6.48	July	0.56	Sept.	12.2	80	203	78	84	nw.
Clifton Hill	Randolph	731	39	52.3	101	June 25	- 2	Jan. 23	29	36.64	6.10	Aug.	1.31	Mar.	16.9	96	167	82	116	sw.
Columbia	Boone	740	48	54.1	99	June 25	- 9	Feb. 2	48	31.70	4.67	May	0.66	Feb.	26.9	104	121	119	125	nw.
Conception	Nodaway	980	49	51.5	102	June 24†	- 5	Jan. 9†	54	30.15	7.50	July	0.52	Sept.	16.3	60	136	150	79	nw.
Downing	Schuyler	876	17	51.4	102	June 25†	- 2	Jan. 9	29	27.72	4.65	July	0.45	Aug.	11.4	67	146	97	99	s.
Edgerton	Platte	856	18	53.0	103	Aug. 3	- 1	Jan. 9	27	26.57	5.83	July	0.54	Sept.	13.8	75	225	28	112	s.
Elsberry	Lincoln	449	7	52.9	100	June 25	-10	Jan. 23	7	31.53	6.70	June	0.86	July	19.3	92	132	144	89	n.
Fayette	Howard	680	58	53.3	100	Sept. 22	- 7	Jan. 23	55	34.96	4.93	July	1.23	Feb.	22.6	78	124	134	107	s.
Fulton	Callaway	818	50	53.9	99	June 24†	-15	Feb. 2	46	32.48	5.52	June	0.90	Feb.	34.7	100	160	98	107	se.
Gorin	Scotland	700	...	...	...	...	...	...	51	29.61	4.86	May	1.18	Mar.	19.4	73	206	80	79	nw.
Grant City	Worth	1,134	34	50.9	103	Sept. 3	- 7	Nov. 21	46	27.43	7.25	July	0.57	Dec.	16.7	68	113	131	121	se.
Hannibal	Marion	759	46	52.7	99	Aug. 16	- 3	Jan. 23	54	30.68	8.92	July	0.59	Feb.	15.6	93	104	98	163	n.
Kansas City	Jackson	741	49	54.7	104	Aug. 3	- 1	Jan. 9	49	24.84	3.73	June	0.21	Sept.	15.6	92	109	120	136	sw.
Kidder	Caldwell	1,020	46	51.1	103	June 25	- 4	Jan. 9	50	28.26	7.85	July	0.39	Sept.	10.9	80	167	106	91	nw.
King City	Gentry	1,095	...	...	...	...	...	...	12	25.69	7.91	July	0.53	Dec.	12.0	75	64	209	81	nw.
Kirkville	Adair	969	49	51.2	100	June 25	- 1	Jan. 9†	56	30.51	5.11	May	0.74	Mar.	19.1	77	126	138	97	nw.
Linneus	Linn	816	...	...	...	...	...	...	6	27.28	4.48	June	0.94	Sept.	8.7	81	185	84	96	nw.
Louisiana	Pike	469	44	52.5	101	June 25	-15	Jan. 23	67	30.44	5.40	May	0.78	Feb.	14.2	78	176	102	87	w.
Macon	Macon	875	39	51.3	102	June 25	- 2	Jan. 23	45	29.43	5.01	July	0.88	Mar.	13.3	76	203	76	86	w.
Maryville	Nodaway	1,169	48	50.8	103	June 24	- 5	Jan. 9	44	25.33	7.78	July	0.64	Dec.	18.9	85	146	69	150	nw.
Mexico	Audrain	800	49	53.0	100	June 24†	-10	Jan. 23	60	34.07	5.38	June	0.90	Feb.	21.7	96	228	11	125	w.
Moberly	Randolph	875	1	51.6	98	July 7	- 5	Jan. 23	1	30.35	4.45	Jan.	1.37	Mar.	17.7	91	171	71	112	nw.
Oregon	Holt	1,048	82	52.5	105	June 25	- 4	Jan. 9	82	28.95	7.20	July	0.62	Sept.	19.0	79	198	101	66	nw.
St. Charles	St. Charles	520	50	54.9	104	Aug. 16	- 0	Jan. 23	60	38.01	9.10	June	0.76	Sept.	23.2	94	214	73	76	nw.
St. Joseph	Buchanan	957	28	53.1	103	June 24	- 2	Jan. 9	66	27.47	7.89	July	0.75	Dec.	14.7	99	176	88	101	nw.
Steffenville	Lewis	650	40	51.9	100	June 25	- 4	Jan. 23	45	35.72	6.40	July	1.27	Sept.	17.0	89	166	112	87	n.
Tarkio	Atchison	916	35	50.3	104	June 24	- 7	Jan. 9	44	31.43	10.36	July	0.62	Feb.	16.0	66	154	114	97	nw.
Trenton	Grundy	822	42	52.1	102	June 25	- 2	Jan. 9	43	29.82	5.30	July	1.01	Oct.	12.1	87	162	119	84	s.
Unionville	Putnam	1,062	45	50.1	101	June 25†	- 4	Jan. 10	45	22.78	4.85	May	0.36	Sept.	9.0	67	180	43	141	s.
Warrenton	Warren	816	56	54.2	97	Aug. 16	- 3	Jan. 23	48	38.60	9.23	June	0.94	Aug.	29.7	106	108	139	118	nw.
Keokuk, Iowa	Lee, Iowa	574	66	51.6	99	June 25	- 1	Jan. 23	66	30.15	5.34	July	0.81	Mar.	14.1	105	121	85	159	sw.
Division means and extremes			..	52.3	105	June 25	-15	Jan. 23†	..	29.85	10.36	July	0.21	Sept.	16.8	83	159	98	108	nw.
Southwestern Division																				
Appleton City	St. Clair	813	43	54.3	99	June 26†	- 2	Feb. 2	46	34.21	6.12	May	1.31	Oct.	21.0	86	215	29	121	sw.
Boonville	Cooper	650	...	...	...	...	...	...	61	32.50	4.88	May	0.54	Sept.	29.3	100	...	...	...	...
Clinton	Henry	765	45	54.5	100	June 26†	- 6	Feb. 2	51	31.78	4.73	May	1.11	Dec.	32.0	93	...	...	...	...
Dean	McDonald	1,000	34	57.0	102	July 5†	- 0	Dec. 9	39	50.43	7.84	Jan.	0.38	Feb.	16.5	90	161	86	116	sw.
Eldon	Miller	934	43	53.6	100	Aug. 3†	- 5	Feb. 3	39	34.83	6.80	June	0.73	Feb.	24.7	99	99	166	98	n.
Garber	Taney	904	4	56.3	105	Aug. 10	- 0	Dec. 10	4	37.45	5.96	Jan.	1.05	Aug.	11.1	93	97	84	184	e.
Harrisonville	Cass	950	60	51.7	102	July 4	- 0	Jan. 9†	63	27.28	4.68	June	0.80	Dec.	29.5	79	124	86	155	nw.
Jefferson City	Cole	557	48	52.6	98	Aug. 16†	- 7	Feb. 2†	56	36.25	5.39	May	1.37	Mar.	23.5	100	147	146	72	e.
Lakeside	Miller	595	7	54.5	100	Aug. 9†	- 6	Feb. 2	7	32.63	9.16	June	0.65	Aug.	...	121	...	...	...	sw.
Lamar	Barton	980	50	55.6	105	July 5	- 1	Jan. 23	57	37.34	8.55	June	1.26	Dec.	16.0	83	190	67	108	sw.
Lebanon	Laclede	1,265	50	55.0	101	Aug. 10	...	...	51	39.23	8.32	June	0.89	Sept.	...	111	...	...	...	sw.
Lexington	Lafayette	688	53	53.7	102	June 23†	- 0	Jan. 9	54	27.25	5.72	July	0.75	Aug.	29.0	104	182	124	59	w.
Lockwood	Dade	1,078	32	56.4	102	Aug. 10	- 4	Jan. 23†	42	45.22	8.81	June	1.38	Sept.	18.0	92	180	111	74	sw.
Marshall	Saline	779	51	54.4	100	Aug. 3	- 0	Jan. 23	48	32.46	4.86	June	1.25	Dec.	20.0	82	211	77	77	sw.
Mountain Grove	Wright	1,463	37	55.3	103	Aug. 9	- 3	Nov. 21	41	42.00	7.02	Jan.	0.98	Aug.	19.2	114	162	121	82	se.
Neosho	Newton	1,011	51	56.9	101	Aug. 10	- 1	Dec. 9†	55	40.74	8.66	Sept.	1.14	Aug.	13.2	105	196	88	81	sw.
Nevada	Vernon	862	45	56.3	102	Aug. 15	- 1	Jan. 23	46	36.11	6.82	June	0.95	Dec.	16.5	77	162	91	112	sw.
Sedalia	Pettis	910	25	55.1	100	Aug. 3†	...	...	27	36.38	5.82	May	1.13	Aug.	...	...	...	...	...	...
Seligman	Barry	1,412	37	55.8	96	July 5†	- 2	Dec. 9†	35	48.88	9.42	Sept.	1.58	Feb.	18.0	90	175	89	84	w.
Seymour (near)	Webster	1,642	32	54.2	97	Aug. 10	- 1	Nov. 21	32	42.04	6.68	June	0.64	Aug.	15.0	102	152	93	112	sw.
Springfield	Greene	1,301	50	55.3	98	Aug. 10	- 6	Dec. 9	50	43.87	9.39	June	1.15	Feb.	20.4	118	126	125	114	s.
Versailles	Morgan	1,037	11	55.0	101	Sept. 22	- 6	Feb. 2	14	35.07	7.40	June	1.03	Feb.	24.1	104	144	91	129	nw.
Warsburg	Johnson	878	51	54.8	102	July 4	- 7	Feb. 2	58	28.94	4.76	Jan.	1.32	Sept.	28.5	94	160	78	127	sw.
Warsaw	Benton	687	37	56.0	101	July 4†	- 8	Feb. 2	43	38.34	5.71	June	0.98	Sept.	24.5	106	153	113	99	u
Division means and extremes			..	55.0	105	July 5†	- 8	Feb. 2	..	36.16	12.37	Sept.	0.30	Sept.	20.4	96	162	98	105	sw.
Southeastern Division																				
Arcadia	Iron	926	57	53.5	98	Aug. 9	- 5	Dec. 11	60	46.90	8.71	Jan.	1.08	Feb.	10.0	105	181	100	84	n.
Birch Tree (near)	Shannon	1,000	43	56.3	101	Aug. 9	- 5	Dec. 11	44	42.93	8.06	Jan.	0.99	Mar.	10.0	84	215	61	89	n.
Campbell	Dunklin	314	12	59.1																



Monthly and Annual Mean Temperatures for the Year 1937, with Departures from Normal

Stations	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure
Northern Division																										
Bethany	20.0	- 4.825.6	- 1.937.8	- 2.551.0	- 0.564.1	+ 1.671.0	- 1.077.3	+ 1.079.7	+ 4.768.9	+ 1.855.1	+ 0.336.6	- 6.227.9	- 2.251.2	- 0.8												
Brunswick	23.8	- 2.928.3	- 1.538.0	- 3.951.6	- 2.665.6	+ 1.474.0	- 1.079.0	+ 2.981.0	+ 6.869.6	+ 2.655.0	- 0.337.6	- 4.029.6	- 1.052.8	- 0.1												
Chillicothe	19.6	- 4.826.0	- 6.338.0	- 3.752.0	- 0.065.4	+ 2.573.2	- 0.978.7	+ 1.780.3	+ 4.869.2	+ 1.755.0	- 0.036.8	- 4.527.8	- 2.151.8	- 0.8												
Clinton Hill	24.5	- 3.629.2	- 1.039.9	- 3.252.6	- 0.964.6	+ 1.073.0	- 0.678.1	+ 1.779.7	+ 3.767.4	+ 1.253.8	- 2.937.2	- 6.228.4	- 2.652.3	- 1.2												
Columbia	25.8	- 3.431.2	- 0.539.4	- 3.253.9	- 1.066.4	+ 2.174.2	- 1.479.0	+ 2.181.2	+ 5.669.9	+ 1.756.2	- 0.440.0	- 3.331.5	- 1.754.1	- 6.0												
Conception	18.1	- 6.624.7	- 3.537.2	- 2.651.7	- 0.565.0	+ 2.972.0	- 0.578.8	+ 2.280.3	+ 5.670.1	+ 2.955.8	- 0.437.5	- 3.927.0	- 2.251.5	- 0.4												
Downing	22.0	- 3.426.2	- 6.137.4	- 4.251.0	- 2.264.9	+ 2.272.5	- 1.177.4	+ 1.079.6	+ 4.767.0	+ 0.654.2	- 1.738.4	- 3.226.0	- 3.651.4	- 1.3												
Edgerton	21.4	- 5.529.0	- 5.338.8	- 4.453.2	- 0.665.2	+ 2.273.4	- 1.579.1	+ 3.081.4	+ 6.869.6	+ 1.756.4	+ 0.138.5	- 3.329.5	- 0.953.0	- 0.4												
Elsberry	27.7	- 31.2	- 39.6	- 53.5	- 64.0	- 73.0	- 76.1	- 78.2	- 80.6	- 82.2	- 83.8	- 85.4	- 87.0	- 88.6												
Fayette	25.2	- 1.830.3	- 0.339.2	- 2.753.7	- 0.565.8	+ 2.073.6	- 0.877.2	+ 1.080.8	+ 4.470.0	+ 1.155.8	- 1.640.4	- 3.830.9	- 2.653.9	- 0.9												
Fulton	26.8	- 2.729.3	- 3.739.2	- 4.953.0	- 1.666.8	+ 2.274.6	- 1.478.7	+ 1.080.8	+ 4.470.0	+ 1.155.8	- 1.640.4	- 3.830.9	- 2.653.9	- 0.9												
Grant City	19.0	- 5.824.4	- 4.237.0	- 4.351.4	- 0.864.0	+ 2.071.0	- 0.277.3	+ 1.179.6	+ 4.769.2	+ 2.254.5	- 0.636.4	- 5.527.0	- 1.050.9	- 1.0												
Hannibal	24.5	- 2.629.4	- 0.339.0	- 2.053.0	- 0.465.0	+ 1.472.6	- 0.177.2	+ 0.479.2	+ 4.268.4	+ 0.755.7	- 0.339.9	- 2.228.9	- 2.652.7	- 0.3												
Kansas City	23.0	- 5.231.2	- 0.039.8	- 2.954.0	- 0.867.2	+ 2.475.8	- 2.281.4	+ 3.383.8	+ 7.272.0	+ 3.157.0	- 0.739.8	- 3.931.2	- 1.354.7	+ 0.3												
Kansas City University	17.2	- 1.824.0	- 4.436.0	- 4.852.0	- 0.264.4	+ 1.872.4	- 0.677.7	+ 1.179.2	+ 3.868.6	+ 1.355.0	- 0.838.2	- 3.628.4	- 0.851.1	- 1.2												
Kidder	21.8	- 3.026.1	- 1.036.8	- 2.950.7	- 1.265.0	+ 2.772.4	- 0.777.9	+ 1.979.4	+ 5.466.8	+ 0.553.6	- 1.137.4	- 3.226.6	- 3.051.2	- 0.4												
Kirksville	21.8	- 3.026.1	- 1.036.8	- 2.950.7	- 1.265.0	+ 2.772.4	- 0.777.9	+ 1.979.4	+ 5.466.8	+ 0.553.6	- 1.137.4	- 3.226.6	- 3.051.2	- 0.4												
Lawson	26.8	- 1.380.4	- 0.538.7	- 4.853.3	- 0.763.2	+ 0.572.5	- 0.476.2	+ 0.278.8	+ 3.966.4	+ 1.655.2	- 1.039.7	- 4.429.0	- 2.852.5	- 1.1												
Louisiana	21.7	- 5.826.6	- 3.037.1	- 5.130.0	- 3.164.5	+ 1.072.9	- 0.578.2	+ 1.078.9	+ 2.867.2	+ 0.753.8	- 2.587.2	- 5.627.8	- 2.351.3	- 1.9												
Macon	17.4	- 5.524.2	- 1.637.0	- 0.951.1	- 0.364.4	+ 3.171.9	- 2.177.9	+ 2.279.8	+ 6.069.2	+ 3.653.8	- 0.336.8	- 2.226.6	- 0.250.8	+ 0.6												
Maryville	24.8	- 3.229.4	- 0.739.0	- 3.052.0	- 1.865.3	+ 1.373.8	- 0.679.3	+ 2.080.9	+ 4.968.4	+ 0.154.9	- 1.438.0	- 4.929.6	- 2.253.0	- 0.7												
Moberly	23.7	- 29.4	- 38.0	- 49.4	- 66.0	- 72.4	- 76.8	- 78.3	- 80.6	- 82.2	- 83.8	- 85.4	- 87.0	- 88.6												
Oregon	19.1	- 5.026.8	- 2.037.9	- 1.753.0	- 0.366.2	+ 3.073.2	- 1.080.0	+ 4.481.6	+ 6.470.3	+ 3.255.4	- 0.338.8	- 1.728.1	- 0.652.5	+ 0.6												
St. Charles	29.3	- 1.733.6	+ 0.340.5	- 4.054.0	- 1.666.8	+ 3.775.6	- 1.779.2	+ 1.182.0	+ 5.270.1	+ 1.856.2	- 2.041.0	- 3.830.7	- 4.254.9	- 0.3												
St. Joseph	20.6	- 4.927.6	- 1.038.7	- 1.832.9	- 0.666.2	+ 2.073.9	- 0.280.5	+ 3.182.5	+ 6.070.9	+ 2.556.2	- 0.238.6	- 2.929.0	- 0.653.1	+ 0.1												
Steffenville	22.8	- 4.628.0	- 1.788.2	- 4.051.8	- 1.364.3	+ 0.572.2	- 0.477.0	+ 0.878.6	+ 2.167.4	+ 1.654.8	- 2.638.8	- 4.728.4	- 2.251.9	- 1.8												
Tarkio	15.8	- 7.124.0	- 5.062.3	- 3.951.2	- 1.064.0	+ 1.471.6	- 0.277.0	+ 0.279.4	+ 4.268.4	+ 2.153.4	- 1.437.0	- 3.126.0	- 0.450.3	- 1.2												
Trenton	20.6	- 5.726.5	- 2.937.9	- 3.252.2	- 0.565.4	+ 1.972.7	- 0.578.3	+ 1.580.1	+ 4.969.0	+ 1.855.6	- 0.338.4	- 3.829.0	- 0.652.1	- 0.5												
Unionville	19.0	- 4.521.8	- 4.935.2	- 3.748.6	- 2.464.0	+ 1.971.4	- 0.177.7	+ 1.280.2	+ 5.467.0	+ 0.153.0	- 2.236.7	- 3.626.6	- 1.050.1	- 1.2												
Warrenton	29.1	- 0.182.2	+ 1.340.2	- 2.355.2	+ 0.465.6	+ 0.773.4	- 0.077.0	+ 0.880.0	+ 3.569.8	+ 0.856.4	+ 0.441.4	- 1.830.6	- 1.854.2	- 0.0												
Keokuk, Iowa	21.9	- 3.027.8	- 0.537.3	- 1.651.1	- 1.264.6	+ 0.872.4	- 0.177.9	+ 1.078.8	+ 3.867.4	+ 0.154.0	- 1.437.8	- 3.328.0	- 1.651.6	- 0.6												
Division means	22.4	- 4.227.8	- 2.338.1	- 3.352.1	- 1.065.1	+ 1.873.0	+ 0.778.1	+ 1.480.1	+ 4.868.7	+ 1.155.1	- 0.938.5	- 3.928.8	- 1.752.3	- 0.6												
Southwestern Division																										
Appleton City	26.2	- 5.132.0	- 1.939.8	- 5.355.0	- 1.166.6	+ 1.675.0	+ 0.678.1	- 0.180.5	+ 2.769.6	- 0.856.3	- 2.639.6	- 6.432.4	- 2.254.3	- 1.7												
Bolivar	26.8	- 4.932.2	- 1.438.8	- 6.255.0	- 1.366.7	+ 1.275.0	+ 1.277.4	- 0.981.0	+ 3.470.8	+ 0.057.0	- 1.940.6	- 6.432.3	- 2.454.5	- 1.6												
Boonville	33.4	- 2.537.2	+ 1.544.1	- 4.757.9	- 1.267.2	+ 1.575.8	+ 3.178.1	- 0.880.4	+ 2.770.0	+ 1.057.4	- 1.345.4	- 3.986.5	- 1.057.0	- 0.3												
Clinton	26.6	- 4.531.4	- 1.738.4	- 5.252.4	- 3.065.8	+ 1.674.2	+ 1.278.0	+ 0.879.9	+ 3.569.6	+ 0.256.0	- 1.439.2	- 5.631.4	- 2.953.6	- 1.4												
Dean	33.0	- 37.2	- 43.0	- 57.4	- 65.9	- 75.2	- 77.9	- 80.4	- 82.2	- 83.8	- 85.4	- 87.0	- 88.6	- 90.2												
Eldon	21.2	- 6.127.2	- 3.537.0	- 4.351.2	- 2.765.0	+ 1.272.8	- 0.378.2	+ 0.580.3	+ 4.468.9	+ 0.454.7	- 1.436.2	- 6.328.0	- 3.351.7	- 1.8												
Garber	25.6	- 4.229.3	- 2.837.7	- 5.932.0	- 4.061.8	+ 1.732.2	- 0.677.4	+ 0.779.6	+ 2.969.0	+ 0.354.5	- 2.338.8	- 5.329.6	- 3.352.6	- 2.2												
Harrisonville	28.4	- 32.4	- 39.4	- 53.6	- 66.3	- 74.9	- 78.4	- 80.6	- 82.2	- 83.8	- 85.4	- 87.0	- 88.6	- 90.2												
Jefferson City	28.5	- 3.633.8	- 1.540.6	- 5.454.2	- 2.067.0	+ 1.477.0	+ 2.879.6	+ 1.282.5	+ 4.871.5	+ 0.757.6	- 1.341.5	- 4.833.6	- 1.655.6	- 0.8												
Lakeside	30.9	- 1.633.3	- 1.138.8	- 6.255.0	- 1.366.7	+ 1.275.0	+ 1.277.4	- 0.981.0	+ 3.470.8	+ 0.057.0	- 1.940.6	- 6.432.3	- 2.454.5	- 1.6												
Lamar	22.4	- 5.428.8	- 2.239.0	- 4.463.0	- 1.667.1	+ 2.775.5	+ 2.680.2	+ 2.882.4	+ 6.270.8	+ 2.056.2	- 1.339.1	- 5.130.2	- 1.853.7	- 0.5												
Lexington	30.1	- 3.237.0	- 0.042.4	- 4.955.6	- 0.967.5	+ 3.175.4	+ 1.879.0	+ 1.481.3	+ 4.171.5	+ 0.659.0	- 0.343.4	- 3.634.6	- 1.556.4	- 0.2												
Lockwood	25.2	- 2.731.4	+ 0.539.4	- 3.654.9	+ 0.167.0	+ 2.742.2	+ 1.078.4	+ 0.980.8	+ 4.870.9	+ 2.157.6	+ 1.040.6	- 4.631.8	- 0.154.4	+ 0.2												
Marshall	32.9	+ 0.135.3	+ 2.214.4	- 0.464.4	- 0.565.8	+ 2.074.5	+ 2.776.6	+ 0.280.4	+ 4.970.2	+ 1.357.0	- 0.641.7	- 4.233.3	- 1.455.3	+ 0.1												
Mountain Grove	32.8	- 2.338.5	+ 0.943.8	- 4.358.2	- 0.167.1	+ 1.175.7	+ 1.979.0	+ 1.580.2	+ 3.170.5	+ 0.058.5	- 0.743.2	- 4.185.6	- 1.556.9	- 0.4												
Mt Vernon	27.8	- 4.135.2	+ 1.342.2	- 2.765.4	+ 0.768.3	+ 3.876.7	+ 2.380.0	+ 0.482.4	+ 5.371.4	+ 1.958.4	+ 0.842.2	- 2.634.2	- 1.556.3	+ 0.6												
Neosho	26.5	+ 0.132.1	+ 1.739.6	- 3.255.6	- 0.367.3	+ 2.075.5	+ 0.879.8	+ 2.382.2	+ 5.771.4	+ 2.258.2	+ 0.541.4	- 1.932.0	- 1.955.1	+ 0.7												
Nevada	32.8	- 2.337.1	- 0.443.6	- 3.067.0	- 0.666.0	+ 1.753.5	+ 1.177.4	+ 0.778.2	+ 2.068.6	+ 1.057.6	- 1.443.0	- 4.334.9	- 2.455.8	- 0.8												
Sedalia	31.0	- 3.034.8	- 0.240.4	- 3.064.6	- 1.166.9	+ 3.271.6	- 0.174.8	+ 0.777.6	+ 2.668.4	+ 0.456.0	- 1.440.8	- 5.133.4	- 2.054.2	- 1.1												
Springfield	30.2	- 3.334.8	- 0.441.2	- 4.055.0	- 1.065.8	+ 1.374.9	+ 2.477.8	+ 1.080.3	+ 4.670.0	+ 1.157.6	- 0.642.0	- 3.733.6	- 2.655.3	- 0.4												
Versailles	28.2	- 5.033.4	- 0.840.2	- 4.855.8	- 0.166.0	+ 0.474.4	+ 0.378.1	+ 0.881.2	+ 2.770.4	+ 0.357.8	+ 0.241.6	- 3.332.6	- 2.855.0	- 1.2												
Warrensburg	25.8	- 2.931.2	- 1.339.8	- 4.255.0	- 1.167.2	+ 2.275.0	+ 1.179.6	+ 0.882.7	+ 5.671.7	+ 1.557.3	+ 0.741.0	- 4.031.7	- 1.754.8	- 0.4												
Warsaw	29.2	- 3.733.6	- 2.041.1	- 5.956.5	- 0.267.0	+ 1.576.0	+ 2.280.2	+ 1.982.1	+ 4.571.8	+ 1.358.4	- 0.642.8	- 4.433.2	- 2.556.0	- 0.7												
Division means	28.6	- 3.533.6	- 0.840.6	- 4.755.1	- 0.966.5	+ 1.874.8	+ 1.478.3	+ 0.780.8	+ 4.070.3	+ 0.657.2	- 0.841.4	- 4.332.9	- 1.955.0	- 0.7												
Southeastern Division																										
Advance	30.6	- 1.332.6	- 1.540.2	- 4.454.2	- 1.161.5	+ 0.473.2																				



## Monthly and Annual Precipitation for the Year 1937, with Departures from Normal

Stations	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure
Northern Division																										
Amity	3.07		1.33		0.99		2.70		6.15		2.48		5.86		3.16		0.40		1.59		1.50		1.17		30.40	
Bethany	3.85	+2.66	0.78	-0.64	1.36	-0.87	2.73	-0.56	2.32	-1.85	1.55	-3.51	5.15	+0.99	2.14	-1.68	0.51	-4.05	1.39	-1.53	0.94	-1.10	0.86	-0.29	23.58	-12.43
Bowling Green	4.96		0.67		0.89		4.07		6.74		3.34		0.90		0.59		1.37		1.41		1.90		1.90		28.96	
Brunswick	4.82	+3.23	1.74	-0.07	1.71	-0.99	3.17	-0.66	3.32	-1.29	3.39	-1.72	5.17	+1.06	3.32	-0.62	1.14	-3.67	1.74	-1.26	1.44	-0.75	1.21	-0.46	32.17	-7.20
Canton	3.34		1.47		1.06		2.80		4.24		2.41		4.53		1.37		1.92		1.87		1.72		1.72		27.92	
Chillicothe	3.52	+2.04	0.87	-0.58	1.32	-1.16	2.78	-0.44	3.94	-0.15	4.17	-0.56	4.48	+3.06	4.65	+0.69	0.56	-4.22	0.86	-2.28	1.61	-0.51	10.71	-0.71	31.47	-4.82
Clifton Hill	4.65	+2.93	1.45	-0.29	1.31	-1.43	3.11	-0.25	2.94	-1.46	4.35	-0.04	5.58	+2.22	6.10	+2.30	1.39	-3.15	2.41	-0.11	1.49	-0.49	1.86	+0.14	36.64	+0.37
Columbia	4.03	+2.11	0.66	-1.38	2.07	-0.87	3.75	-0.02	4.67	+0.21	4.01	-0.75	2.92	-0.57	1.98	-1.62	1.92	-2.43	1.64	-0.97	2.27	+0.07	1.78	-0.08	31.70	-6.30
Conception	2.16	+1.37	2.33	+1.18	1.79	+0.14	3.80	+1.07	4.83	+0.77	1.91	-3.04	7.60	+2.83	2.17	-1.47	0.52	-4.12	1.58	-1.30	1.01	-0.73	0.55	-6.33	30.15	-3.63
Downing	2.77	+1.45	2.33	+0.95	1.05	-1.11	3.43	-0.45	3.29	-1.87	3.89	-1.30	4.65	+0.84	4.45	-3.19	2.18	-3.01	1.83	-1.23	0.83	-1.15	1.02	-0.44	27.72	-10.51
Edgerton	2.38	+1.53	1.05	-0.29	1.57	-0.69	1.84	-1.24	3.04	-0.16	2.12	-2.75	5.83	+2.33	4.34	+0.30	0.54	-4.05	1.37	-1.25	1.13	-0.84	1.36	+0.24	26.57	-7.87
Edina	3.01		1.58		1.01		3.14		3.78		3.12		4.60		2.51		1.63		0.95		1.41		1.15		27.90	
Elsberry	4.41		1.90		0.94		3.35		3.94		6.70		0.86		2.11		1.19		2.11		2.11		1.91		31.53	
Farber	3.78		0.62		1.01		3.59		3.76		4.43		1.09		2.63		1.17		1.97		2.42		1.91		28.38	
Fayette	4.35	+2.56	1.23	-0.47	1.67	-1.15	2.64	-0.91	4.36	+0.04	4.32	-0.25	4.93	+1.68	2.80	-0.76	1.32	-3.64	2.65	-0.24	2.43	+0.33	2.26	+0.60	34.96	-2.21
Fulton	4.46	+2.44	0.90	-0.77	1.90	-1.06	4.17	+0.16	4.41	-0.19	5.52	+1.12	2.28	-1.01	1.89	-2.16	1.35	-3.14	1.19	-1.23	2.32	+0.01	1.49	-0.52	32.48	-6.35
Gallatin	3.17	+1.95	1.02	-0.57	1.19	-1.13	4.53	+0.97	5.64	+0.92	3.24	-1.82	5.52	+1.40	3.05	-0.75	0.57	-4.63	1.06	-2.12	0.94	-1.14	1.14	-0.14	31.07	-7.66
Garin	3.18	+1.80	1.60	+0.20	1.18	-1.04	3.44	+0.03	4.86	+0.29	3.61	-1.06	4.01	+0.40	2.36	-1.10	1.27	-3.40	1.23	-1.75	1.37	-0.66	1.50	+0.10	29.61	-6.19
Grant City	2.50	+1.53	0.64	-0.47	1.32	-0.69	2.74	-0.22	5.05	+0.82	2.87	-2.13	7.25	+2.62	1.23	-2.71	0.73	-3.96	1.30	-1.74	1.23	-0.62	0.57	-0.49	27.43	-8.06
Hannibal	4.30	+2.58	0.59	-1.27	0.83	-1.77	3.81	+0.62	3.28	-1.07	1.84	-2.06	8.92	+5.83	1.45	-1.89	0.55	-2.92	1.11	-1.28	1.50	-0.56	2.09	+0.46	30.68	-3.33
Hermann	5.30	+3.37	1.15	-0.50	1.99	-0.84	4.89	+0.86	3.43	-0.74	8.24	+3.87	2.59	-0.75	3.34	-0.33	1.14	-3.24	2.06	-1.57	2.35	-0.12	1.85	+0.04	38.33	+0.05
Kahoka	4.12		1.60		0.90		3.83		4.70		4.10		2.75		0.55		1.70		2.74		1.77		2.03		29.79	
Kansas City	3.87	+2.18	0.86	-0.89	1.73	-0.80	2.51	-0.63	3.63	-1.02	3.73	-1.26	3.11	-1.02	2.26	-1.83	0.21	-4.35	1.15	-1.77	1.33	-0.50	0.95	-0.38	24.84	-12.27
Kansas City University																										
Kidder	3.07	+1.85	0.94	-0.60	1.32	-0.87	2.35	-0.93	3.79	-0.86	2.78	-2.19	7.85	+3.97	2.02	-1.94	0.39	-4.81	1.24	-1.83	1.23	-0.92	1.23	+0.01	28.26	-9.12
King City	2.65	+1.51	0.67	-0.83	1.06	-1.00	2.19	-1.11	3.67	-0.54	1.92	-3.39	7.91	+4.37	2.03	-1.65	0.60	-4.82	1.35	-1.55	1.11	-0.85	0.53	-0.55	25.69	-10.41
Kirksville	2.73	+1.21	2.62	+1.09	0.74	-2.20	3.00	-1.10	5.11	-0.22	2.07	-2.99	3.83	-0.48	5.04	+0.92	1.97	-3.21	1.45	-1.71	1.20	-0.92	0.76	-1.00	30.61	-10.61
La Belle	3.60		1.82		1.11		2.88		3.76		2.99		4.68		3.55		2.09		1.53		1.29		1.40		30.70	
Lawson													7.50		4.37		0.60		1.18		1.70		1.14		27.28	
Linneus	3.30		1.27		1.48		2.72		2.67		4.48		4.06		2.70		1.55		2.88		1.53		2.06		24.45	-10.12
Louisiana	3.92	+1.77	0.78	-1.30	0.86	-2.61	5.18	+1.46	5.40	+0.70	3.45	-0.78	1.35	-2.25	1.69	-2.85	0.65	-5.01	1.51	-2.02	0.89	-1.39	0.82	-0.79	25.56	-13.22
Lucerne	3.26	+2.24	1.40	+0.20	0.89	-1.16	3.45	-0.11	2.87	-1.86	2.23	-3.35	4.45	+1.42	3.05	-1.39	0.65	-5.01	1.51	-2.02	0.89	-1.39	0.82	-0.79	25.56	-13.22
Macon	4.04	+2.34	0.99	-0.71	0.88	-1.96	1.22	-2.44	3.42	-1.17	2.34	-2.38	5.45	+1.60	4.35	+1.14	1.35	-3.09	1.49	-1.40	2.28	+0.09	1.46	-0.18	29.43	-8.16
Madison	4.79		0.71		1.26		2.59		4.00		2.00		4.64		4.37		1.32		3.09		1.50		2.53		31.67	
Maryville	2.16	+1.16	0.91	-0.52	1.52	-0.35	3.37	+0.36	2.26	-2.39	2.00	-3.11	7.78	+2.55	2.37	-2.87	0.72	-3.96	1.21	-1.76	1.15	-0.77	0.61	-0.44	25.33	-11.60
Memphis	2.85		1.57		1.22		3.08		3.45		1.94		4.94		0.62		1.02		1.14		1.19		1.22		24.24	
Mexico	4.72	+2.69	0.90	-0.95	1.76	-1.15	3.51	-0.24	4.03	-0.57	5.28	+0.64	3.13	-0.08	3.42	-0.43	0.39	-4.33	1.63	-1.44	2.41	+0.21	1.76	-0.15	34.07	-5.05
Milan	4.53	+3.36	1.82	+0.44	1.36	-0.89	3.60	-0.91	5.73	+0.91	2.22	-2.88	3.65	+0.57	2.40	-1.38	0.60	-4.94	1.39	-2.58	1.34	-0.84	1.18	-0.63	29.74	-9.77
Moberly	4.45		1.50		1.37		3.68		3.82		3.35		6.37		2.43		1.42		1.41		1.85		1.91		30.35	
Monroe City	3.92	+2.01	0.79	-0.62	0.99	-1.90	2.77	-0.90	3.79	-0.61	2.78	-0.61	3.73	+2.71	1.81	-2.49	0.89	-3.94	1.80	-0.80	2.02	-0.30	1.97	+0.04	29.48	-9.53
New London	5.26		1.00		0.94		3.24		3.19		2.16		7.20		1.40		1.91		1.70		1.15		2.08		27.87	
Oregon	2.23	+1.30	1.14	-0.23	1.86	-0.10	3.82	+0.53	4.21	-0.32	1.81	-3.53	7.24	+3.02	2.27	-1.53	0.62	-4.48	1.01	-1.74	1.52	-0.46	1.23	+0.19	28.95	-7.35
Palmyra	2.25	+0.25	0.73	-1.01	0.54	-2.14	3.23	-0.50	3.64	-0.67	2.22	-2.53	8.46	+5.21	2.62	-1.22	0.09	-3.68	1.25	-1.11	1.18	-1.06	2.08	+0.44	29.29	-8.02
Paris	3.87		0.62		1.04		2.36		4.16		3.56		3.87		1.91		0.89		1.67		2.68		2.12		29.23	
Perry	3.68		0.49		0.95		3.34		4.29		2															



Monthly and Annual Precipitation for the Year 1937, with Departures from Normal—Concluded

	January		February		March		April		May		June		July		August		September		October		November		December		Annual		
Stations	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	
Southern Division																											
Advance	.....	.....	1.57	.....	1.32	.....	3.97	.....	2.20	.....	5.24	.....	3.20	.....	2.90	.....	3.21	.....	5.02	.....	2.40	.....	2.36	.....	.....	.....	
Annapolis	9.80	.....	1.29	.....	1.48	.....	4.57	.....	2.22	.....	3.92	.....	6.81	.....	2.43	.....	2.66	.....	3.74	.....	2.69	.....	3.21	.....	44.82	.....	
Arcadia	8.71	+5.72	1.08	-1.40	1.52	-2.53	5.53	+0.71	3.89	-0.35	5.41	+1.27	4.96	+0.84	1.55	-2.82	3.02	-0.96	4.92	+1.47	2.79	-0.33	3.52	+0.67	46.90	+2.29	
Bellevue	7.05	.....	0.90	.....	1.62	.....	6.25	.....	4.25	.....	4.99	.....	7.25	.....	2.30	.....	5.10	.....	2.55	.....	2.46	.....	3.33	.....	48.05	.....	
Birch Tree(near)	8.06	+4.88	1.75	-0.75	0.99	-2.99	5.20	+0.44	3.08	-1.27	6.47	+2.06	3.60	+0.02	1.13	-3.63	3.41	-0.27	3.24	-0.04	2.24	-0.92	3.76	+1.01	42.93	-1.46	
Bragg City	16.28	.....	1.80	.....	2.39	.....	5.72	.....	1.69	.....	8.80	.....	6.34	.....	0.88	.....	7.17	.....	4.80	.....	3.19	.....	3.84	.....	62.85	.....	
Campbell	13.29	+7.99	0.78	-2.55	2.98	-2.94	6.21	+1.95	1.61	-3.40	7.12	+2.88	7.50	+4.02	0.96	-5.02	6.32	+2.45	4.11	+1.01	2.60	-1.10	4.40	+0.45	57.88	+5.74	
Cape Girardeau	12.32	+8.34	1.62	-0.78	1.14	-2.70	5.86	+1.98	6.01	+1.94	6.35	+2.05	1.82	-1.60	0.78	-3.12	4.26	+0.25	4.19	+0.89	2.07	-1.51	2.19	+1.48	48.61	+4.26	
Caruthersville	15.76	+10.57	1.62	-1.76	1.87	-2.59	6.95	+2.43	2.27	-2.17	2.05	-1.76	7.53	+4.24	3.17	-0.52	3.36	+0.15	7.12	+3.76	2.55	-1.30	3.86	-0.68	58.11	+10.37	
Centerville	7.89	.....	1.59	.....	1.43	.....	5.46	.....	1.95	.....	4.86	.....	2.86	.....	0.55	.....	2.66	.....	3.00	.....	2.83	.....	4.47	.....	39.45	.....	
Crystal City	6.51	.....	1.48	.....	1.75	.....	5.41	.....	2.79	.....	6.28	.....	3.37	.....	0.87	.....	1.46	.....	3.78	.....	1.62	.....	4.15	.....	39.47	.....	
Cuba	5.23	.....	1.64	.....	1.80	.....	4.18	.....	4.02	.....	4.34	.....	1.75	.....	0.67	.....	1.10	.....	1.99	.....	0.76	.....	4.10	.....	31.58	.....	
Dexter	15.68	+10.64	2.39	-0.69	1.95	-2.93	3.27	-1.32	3.46	-1.33	5.97	+1.56	7.77	+4.65	1.39	-2.73	4.26	-0.26	5.84	+1.58	1.60	-2.32	2.50	-1.49	56.08	+5.36	
Doniphan	8.60	+4.50	1.60	-1.71	1.44	-2.95	3.05	-1.88	2.75	-1.61	10.46	+6.10	4.45	+0.41	0.89	-3.35	9.69	+6.08	4.74	+1.68	2.69	-0.73	3.37	-0.35	53.73	+6.19	
Farmington	7.55	+4.41	0.95	-1.57	1.31	-2.61	5.95	+1.43	3.21	-1.86	4.45	+0.57	6.27	+2.71	2.04	-2.26	1.08	-2.72	4.78	+1.34	2.53	-0.29	3.13	+0.33	43.25	-0.62	
Fisk	13.02	.....	2.56	.....	1.31	.....	4.30	.....	2.79	.....	6.81	.....	10.90	.....	0.34	.....	6.08	.....	4.09	.....	1.33	.....	2.21	.....	55.74	.....	
Fredericktown	10.43	+6.72	1.80	-0.83	1.26	-2.39	6.08	+1.60	2.19	-1.90	5.99	+1.76	4.15	+0.93	0.61	-3.65	4.37	+0.41	5.67	+1.28	2.47	-0.85	3.30	+0.13	48.32	+3.21	
Goodland	8.01	+5.31	1.02	-1.26	1.60	-2.29	6.20	+1.31	3.57	-0.94	5.54	+1.48	2.73	-0.96	1.23	-3.01	2.96	-0.90	2.83	-0.76	2.18	-0.54	3.56	+1.11	41.43	-1.45	
Greenville	15.19	+11.87	0.39	-2.33	1.33	-2.93	5.08	+0.38	1.95	-2.23	3.93	-0.76	3.56	-0.20	3.32	-0.96	3.88	+0.56	4.24	+0.96	3.05	-0.31	2.60	-0.76	48.52	+3.29	
Jackson	15.05	+11.11	1.61	-1.27	1.61	-2.56	5.09	+1.55	3.18	-1.09	5.99	+0.40	2.57	-0.97	3.08	-1.00	4.53	+0.51	4.76	+1.24	2.35	-1.03	2.99	-0.44	52.71	+6.45	
Jerome	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Koshkonong	11.02	+7.40	2.06	-0.80	1.08	-3.02	3.09	-1.93	3.56	-0.99	5.98	+1.48	3.49	-0.28	4.65	+0.49	3.51	-0.13	3.42	+0.20	3.08	-0.18	3.76	+0.28	48.70	+2.82	
Leeper	11.65	+7.75	1.61	-1.04	1.55	-2.09	5.21	+0.29	1.75	-2.65	5.06	-0.38	4.99	+1.67	2.36	-1.75	3.67	+0.44	4.04	+0.13	2.83	-0.55	3.48	-0.30	48.20	+1.62	
Licking(near)	6.06	.....	1.61	.....	1.63	.....	4.52	.....	4.15	.....	3.60	.....	2.33	.....	0.55	.....	2.76	.....	2.12	.....	1.43	.....	3.92	.....	34.68	.....	
Marble Hill	13.29	+9.42	1.74	-1.34	1.12	-3.16	5.10	+0.61	2.71	-1.78	4.24	-0.24	4.25	+0.23	1.53	-2.59	4.15	+0.27	4.25	+0.83	2.71	-0.84	2.41	-1.26	47.50	+0.16	
Meramec Park	4.49	.....	1.28	.....	1.60	.....	5.11	.....	3.53	.....	4.41	.....	2.85	.....	1.86	.....	2.55	.....	2.39	.....	1.79	.....	3.68	.....	35.54	.....	
Morehouse	13.85	+8.94	1.41	-2.33	1.70	-3.21	5.64	+0.79	4.38	+0.10	4.86	+0.63	1.86	-1.15	1.16	-2.75	6.76	+2.84	5.80	+2.27	2.35	-1.28	3.29	-0.93	53.06	+3.92	
New Madrid	13.66	+8.17	1.15	-2.60	2.00	-2.83	7.80	+3.22	3.33	-1.10	3.70	-0.80	2.63	-1.34	0.97	-3.13	3.96	+0.37	5.41	+1.64	2.61	-1.42	2.12	-2.49	49.34	-2.31	
Owensville	4.39	+2.57	1.27	-0.39	1.37	-1.95	3.81	+0.50	5.42	+0.62	6.84	+2.19	3.61	-0.01	1.75	-2.09	0.57	-2.92	1.73	-1.70	1.26	-1.55	2.64	+0.31	34.66	-4.42	
Parma	16.61	+11.35	0.86	-2.02	1.96	-3.40	6.95	+2.71	3.22	-0.94	7.27	+3.79	4.85	+0.96	0.35	-4.22	6.26	+1.21	5.43	+2.29	1.36	-3.11	4.70	-0.08	59.82	+8.64	
Poplar Bluff	13.11	+8.69	2.16	-0.73	1.42	-2.94	4.29	-0.22	2.12	-2.40	7.08	+2.96	7.62	+3.68	1.00	-3.57	4.71	+0.82	4.68	+1.02	2.77	-0.71	2.90	-1.09	53.86	+5.51	
Richwoods	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Rolla	5.41	+2.95	1.34	-0.71	2.26	-1.37	4.65	+0.43	4.59	-0.16	6.74	+2.33	5.18	+1.79	2.80	-1.64	0.93	-3.21	1.86	-1.60	1.65	-1.03	3.58	+1.40	40.99	-0.82	
St. Louis	5.21	+2.87	1.52	-1.04	1.75	-1.63	6.03	+2.22	2.65	-1.69	5.84	+2.02	0.67	-2.31	1.57	-1.42	2.02	-1.44	3.51	+0.79	1.19	-1.64	3.91	+1.70	35.87	-1.57	
St. Louis Airport	5.40	.....	1.34	.....	2.14	.....	4.79	.....	4.08	.....	6.78	.....	1.10	.....	1.38	.....	2.21	.....	3.39	.....	1.19	.....	3.05	.....	36.85	.....	
St. Louis University	5.40	+2.80	1.45	-0.86	1.03	-2.31	4.78	+0.92	3.24	-0.95	5.45	+1.86	0.71	-2.47	0.80	-3.14	1.87	-1.89	3.55	+0.39	1.18	-1.36	3.65	+1.21	33.11	-5.80	
Salem	6.01	+3.29	1.61	-0.67	1.81	-2.06	5.03	+0.53	4.81	+0.30	2.62	-2.03	2.10	-1.40	0.60	-3.97	3.66	-0.22	2.12	-1.50	1.55	-1.09	4.20	+1.66	36.12	-7.16	
Sikeston	14.48	+9.62	1.44	-1.78	2.00	-2.46	5.84	+1.22	5.30	+1.06	4.83	+0.64	1.63	-2.09	1.10	-2.70	6.18	+2.30	5.46	+2.19	2.14	-1.42	3.37	-0.57	53.77	+6.01	
Union	5.38	+3.06	1.33	-0.87	1.38	-1.92	5.60	+1.24	4.13	-0.41	5.94	+1.64	2.23	-1.71	1.12	-3.58	1.55	-2.64	2.60	-0.88	1.14	-1.61	3.21	+1.00	35.61	-6.68	
Valley Park	5.63	+3.37	1.11	-0.78	1.21	-2.16	4.72	+0.60	2.68	-1.79	6.56	+2.68	2.84	-0.08	3.79	-0.26	0.38	-3.16	3.18	-2.11	1.19	-1.41	3.61	+1.44	36.90	-1.76	
Van Buren	.....	.....	1.55	.....	1.20	.....	5.20	.....	1.95	.....	5.92	.....	3.17	.....	0.87	.....	3.24	.....	3.21	.....	2.63	.....	2.92	.....	.....	.....	
West Plains	19.19	.....	1.67	.....	1.46	.....	4.90	.....	2.01	.....	7.94	.....	5.09	.....	1.65	.....	2.10	.....	3.00	.....	2.45	.....	3.16	.....	44.62	.....	
Williamsville	14.17	+9.71	1.31	-1.33	1.61	-2.29	5.01	+0.29	2.58	-1.89	6.48	+0.65	5.85	+1.82	4.72	-0.62	2.80	-0.57	5.51	+1.40	1.94	-1.65	2.86	-1.50	54.84	+4.02	
Willow Springs(near)	8.48	+5.30	1.47	-1.09	1.10	-3.14	4.91	+0.07	3.26	-1.34	4.36	-0.47	2.79	-1.01	2.67	-1.41	2.48	-1.60	2.92	-0.40	1.94	-1.40	3.41	+0.61	39.79	-5.88	
Zalma	13.26	.....	1.83	.....	1.32	.....	5.47	.....	1.99	.....	4.68	.....	1.53	.....	0.27	.....	4.40	.....	4.34	.....	2.85	.....	2.56	.....	47.50	.....	
Cairo, Ill.	15.45	+11.69	1.57	-1.56	1.36	-2.39	4.39	+0.67	4.92	+1.21	3.06	-0.77	1.53	-1.54	0.42	-2.60	3.18	+0.29	4.47	+1.71	1.99	-1.69	3.04	-0.36	45.38	+4.66	
Division means	10.28	+6.87	1.48	-1.14	1.56	-2.47	5.21	+0.89	3.25	-1.20	5.56	+1.31	4														







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# CLIMATOLOGICAL DATA

19  
**MISSOURI SECTION**  
ROSCOE NUNN  
ST. LOUIS, MO.  
Vol. XLII JANUARY 1938 No. 1  
PRICE: 5 CENTS A COPY; 25 CENTS A YEAR

## GENERAL SUMMARY

Mild weather conditions prevailing in late December continued into January, making the first five days considerably warmer than normal. A sharp change to colder occurred about the 7th, but this cold spell only lasted two or three days, and another period of mild weather began on the 11th and continued until the 24th. The last week of the month was marked by strong temperature changes, with unusually cold on the 25th and 26th, mild on the 28th and 29th, and the lowest temperatures of the month on the 31st. On the whole, the month was moderate in temperature, averaging considerably warmer than normal, but with no great extremes of either high or low temperature.

Precipitation was extremely light during the first 18 days of the month, but good rains began about the 19th and by the 24th the moisture deficiency in northern and western sections was relieved. Moderate precipitation also occurred on the 30th, which brought total precipitation for the month to above normal in the northern and western sections, where good rains had been much needed. However, the western half of the northwestern quarter of the State was still in need of much more precipitation to restore subsoil moisture depletion that had taken place during the last three or four months. Snowfall was extremely light during the month, the average for the State being only 0.3 inch, which is the second smallest amount for January in the last 47 years, although several other Januaries had almost as little.

Wheat, barley, rye, and pastures were still small and backward at the end of January. Although beginning to improve towards the close of the month, these crops were generally in only fair condition. Livestock was in fair to very good condition.

Rivers of the State continued unusually low, but rose during the last week of the month. At St. Louis the Mississippi rose to an above-zero stage on the 25th, for the first time in 141 days.

## TEMPERATURE

The monthly mean temperature for the State, 81 stations reporting, was 33.1°, or 2.3° above normal. The highest monthly mean was 38.8° at Campbell, and the lowest monthly mean was 27.0° at Tarkio. The highest temperature recorded was 75° at Garber on the 16th, and the lowest was 9° below zero at Tarkio on the 31st. The greatest daily range was 50° at Lamar on the 5th and at Garber on the 28th.

## PRECIPITATION

The average precipitation for the State, 139 stations reporting, was 2.93 inches, or 0.53 inch more than normal. The greatest local monthly amount was 5.55 inches at Mountain Grove, and the least local monthly amount was 0.39 inch at Tarkio. The greatest amount in any twenty-four hours was 3.50 inches at Louisiana on the 23d-24th. The average number of days with 0.01 inch or more of precipitation was 6. The snowfall averaged 0.3 inch, or 4.0 inches less than normal. The greatest monthly snowfall was 3.5 inches at Warrenton.

## MISCELLANEOUS PHENOMENA

Aurora.—25th.  
Duststorms.—Locally on 11th, 12th, 15th, 16th, 25th.  
Fog.—Dense, 3d, 10th, 11th, 12th, 18th, 19th, 20th, 21st, 22d, 23d, 24th, 29th.  
Glaze.—30th, 31st.  
Halos.—Solar, 3d, 25th, 26th, 29th; lunar, 10th.  
(Continued on page 4)

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind				Relative humidity			Percentage of sunshine
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12 noon	6:30 p. m.	
Columbia.....	30.06	30.73	31	29.27	24	9.2	30	nw.	24	82	67	67	42
Kansas City.....	30.08	30.72	31	29.47	24	11.3	39	nw.	25	75	62	62	60
St. Joseph.....	30.08	30.70	31	29.49	24	10.1	34	nw.	25	79	59	57	59
St. Louis.....	30.06	30.71	31	29.06	24	13.4	35	sw.	30	75	66	66	48
Springfield.....	30.07	30.67	31	29.27	24	11.3	32	w.	25	79	64	65	51
Cairo, Ill.....	30.09	30.66	31	29.19	24	10.0	32	sw.	24	78	63	66	57
Keokuk, Iowa..	30.07	30.70	31	29.25	24	8.6	30	nw.	30	75	61	65	41

## COMPARATIVE DATA FOR JANUARY

Year	Temperature			Precipitation					Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy
1888.....	21.5	74	-32	2.14	1.76	2.20	2.47	....	6	..	..	..
1889.....	31.8	69	-2	2.53	1.65	2.48	3.45	....	6	..	..	..
1890.....	33.8	81	-19	5.18	3.23	4.18	8.14	....	9	..	..	..
1891.....	34.1	74	-1	1.63	1.36	0.98	2.56	4.3	6	..	..	..
1892.....	24.0	67	-31	1.87	1.80	1.87	1.93	....	4	14	8	9
1893.....	22.5	66	-14	0.45	0.51	0.41	0.42	2.4	3	9	11	11
1894.....	31.4	77	-35	2.48	1.90	2.95	2.59	2.7	5	13	9	9
1895.....	24.7	78	-22	1.66	0.97	1.44	2.57	9.4	5	14	8	9
1896.....	32.9	71	-9	1.19	1.05	0.85	1.67	3.1	4	10	7	14
1897.....	28.4	72	-16	5.24	4.18	5.50	6.04	4.0	8	12	7	12
1898.....	34.3	75	-10	4.11	4.02	3.84	4.48	8.4	9	11	8	12
1899.....	30.2	70	-21	1.93	0.62	1.20	3.96	4.0	6	12	8	11
1900.....	34.5	77	-9	1.28	0.98	1.18	1.67	0.2	4	14	7	10
1901.....	35.0	72	-11	1.31	1.21	1.45	1.27	0.8	4	17	7	7
1902.....	30.1	72	-17	1.36	1.07	0.95	2.05	6.9	5	16	7	8
1903.....	31.4	73	-11	1.49	1.07	1.41	1.98	5.0	6	13	6	12
1904.....	27.0	66	-23	3.01	2.64	2.74	3.66	7.4	8	14	6	11
1905.....	22.3	72	-19	2.04	1.06	2.10	2.95	6.8	8	14	6	11
1906.....	35.6	77	-8	3.44	2.20	3.07	5.04	9.2	6	14	5	12
1907.....	34.3	79	-5	5.04	4.14	5.28	5.69	2.8	12	7	6	18
1908.....	34.4	68	-10	1.67	0.50	1.47	3.04	3.6	5	19	5	7
1909.....	33.7	83	-20	2.36	2.01	1.70	3.36	6.5	7	6	7	18
1910.....	32.3	78	-24	1.82	1.96	1.73	1.78	3.5	5	13	6	12
1911.....	34.6	78	-19	0.84	1.57	0.32	0.64	0.7	5	8	7	10
1912.....	20.0	70	-36	1.22	0.85	0.79	2.51	6.5	4	14	7	10
1913.....	33.1	74	-12	4.18	1.53	2.63	8.38	2.6	8	13	6	12
1914.....	38.1	78	-1	1.45	0.96	1.43	1.95	1.0	4	12	7	12
1915.....	29.1	76	-24	2.88	2.29	2.48	3.86	5.4	8	12	5	14
1916.....	31.6	72	-24	7.66	5.23	8.32	9.42	3.4	12	9	4	18
1917.....	32.9	76	-10	1.53	0.75	1.05	2.79	2.3	5	15	7	9
1918.....	16.4	67	-24	1.72	1.08	1.45	2.63	16.6	7	12	7	12
1919.....	34.0	70	-23	0.44	0.14	0.32	0.85	1.4	2	20	5	6
1920.....	28.6	72	-5	1.72	0.62	1.39	3.25	5.7	5	15	5	11
1921.....	37.1	74	-1	1.88	1.42	2.07	2.15	5.4	6	10	7	14
1922.....	29.5	66	-6	1.33	1.08	1.41	1.50	3.9	5	14	5	12
1923.....	39.2	75	3	2.58	0.77	2.21	4.77	0.6	6	12	7	12
1924.....	24.9	68	-25	1.59	1.08	1.64	2.05	5.7	7	14	5	12
1925.....	29.7	65	-15	1.05	0.41	1.29	1.44	4.7	4	15	7	9
1926.....	32.7	70	-20	1.93	1.28	1.91	2.60	4.2	6	11	7	13
1927.....	30.8	73	-24	3.05	0.90	2.43	5.81	3.6	6	13	6	12
1928.....	33.3	77	-18	0.97	0.31	0.81	1.80	0.5	3	16	7	8
1929.....	25.1	72	-13	3.51	2.77	2.79	4.96	6.8	8	11	6	14
1930.....	20.8	73	-31	4.62	2.38	4.18	7.30	13.0	10	12	5	14
1931.....	36.0	76	-5	0.74	0.39	0.65	1.18	2.0	4	16	6	9
1932.....	36.4	73	-7	3.56	1.78	3.23	5.66	1.5	5	14	8	9
1933.....	41.4	72	8	2.56	1.73	2.62	3.34	0.5	6	13	6	12
1934.....	36.1	71	-6	1.34	0.88	1.33	1.82	0.5	7	12	6	13
1935.....	33.0	71	-12	2.57	1.47	2.44	3.81	0.5	7	11	7	13
1936.....	24.4	74	-25	1.01	1.69	0.56	0.77	7.6	7	12	6	13
1937.....	28.5	70	-15	6.38	3.66	5.20	10.23	4.3	11	9	5	17
1938.....	33.1	75	-9	2.93	2.53	3.00	3.27	0.3	6	13	6	12
Period.....	30.8	83	-36	2.40	1.62	2.18	3.40	4.3	6	13	6	12



## Climatological Data for January 1938

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observers	
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Length of record, years	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelted	With precip., .01 inch or more	Clear	Partly cloudy			Cloudy
Northern Division																					
Bethany	Harrison	916	43	29.2	+ 4.4	57	28	- 5	31	42	45	1.43	+0.24	1.15	1.0	3	13	9	9	nw	A. S. Cumming
Brunswick	Chariton	652	57	29.8	+ 3.1	58	16	- 0	31	41	59	2.73	+1.14	1.82	0.2†	6	13	3	15	nw	O. K. Benecke
Chillicothe	Livingston	779	29	28.6	+ 4.2	60	28	- 2	31	48	32	1.73	+0.25	1.56	0	3	15	4	12	nw	Wm. J. Olenhouse
Clifton Hill	Randolph	731	39	30.0	+ 1.9	50	16†	- 2	31	39	29	2.56	+0.84	1.05	0.2	6	10	7	14	nw	Dr. A. J. Bradsher
Columbia	Boone	740	48	32.4	+ 3.2	62	16	- 1	31	48	48	3.34	+1.42	2.19	0.3	7	10	4	17	w	U. S. Weather Bureau
Conception	Nodaway	980	49	27.8	+ 3.1	57	28	- 6	31	44	54	1.16	+0.37	1.12	T.	3	12	11	8	nw	Fr. Adelhelm Hess
Edgerton	Platte	856	18	31.6	+ 4.7	61	16	- 2	31	44	27	1.46	+0.61	1.26	0.2	5	16	3	12	n	Fred L. Stiff
Elsberry	Lincoln	449	7	32.2	.....	60	16	- 3	31	43	7	1.83	.....	1.01	2.0	7	9	6	16	n	Ray E. Mill
Fayette	Howard	680	58	32.0	+ 5.0	60	16	- 1	31	40	55	2.98	+1.19	1.22	T.	5	13	2	16	sw	Morrison Observatory
Fulton	Callaway	818	50	31.2	+ 1.7	62	16	- 3	31	45	46	3.39	+1.37	2.74	0.4	8	11	5	15	sw	Clyde C. Herring
Garin	Scotland	700	..	.....	.....	..	..	..	..	..	51	3.18	+1.80	1.55	0.5	6	13	7	11	nw	W. L. Barker
Grant City	Worth	1,134	31	28.0	+ 3.2	56	5	- 8	31	45	46	0.87	-0.10	0.82	0.5	4	7	9	15	sw	Howard Rybolt
Hannibal	Marion	759	46	30.1	+ 3.0	56	16	- 1	31	42	54	4.09	+2.37	2.20	1.2	8	10	1	20	nw	Hannibal Water Dept.
Kansas City	Jackson	741	49	32.0	+ 3.8	60	28	- 2	31	37	49	1.89	+0.70	1.77	0.2	5	10	7	14	sw	U. S. Weather Bureau
Kansas City University	Jackson	908	0	33.7	.....	61	16†	- 2	31	42	0	1.71	.....	1.17	0.2	5	14	7	10	nw	University of Kansas City
Kidder	Caldwell	1,020	46	29.8	+ 3.8	56	16	- 3	31	41	50	1.78	+0.56	1.50	0	4	12	7	12	nw	Roscoe L. Terry
Kiwig City	Gentry	1,095	..	.....	.....	..	..	..	..	..	12	1.37	+0.23	1.11	0	4	5	16	10	nw	John M. Martin
Kirkville	Adair	969	49	29.1	+ 4.3	56	16	- 4	31	44	56	2.50	+0.98	1.04	0.5	7	8	13	10	n	Charles Noble
Lawson	Ray	1,050	0	31.4	.....	58	16†	- 2	31	43	0	1.88	.....	1.65	T.	7	13	7	11	nw	Elmer E. Lamb
Linneus	Lincoln	816	..	.....	.....	..	..	..	..	..	6	2.36	.....	1.67	T.	3	14	4	13	nw	H. D. Taggart
Louisiana	Pike	469	44	30.1	+ 2.0	55	16	- 1	31	43	57	4.20	+2.05	3.50	1.7	7	18	6	7	s	Stark Bros's Nurseries
Macon	Macon	875	39	27.8	+ 0.3	56	16	- 3	31	46	45	2.91	+1.21	2.10	T.	3	11	8	12	w	W. C. Brown
Maryville	Nodaway	1,169	48	27.8	+ 4.9	56	5†	- 7	31	44	44	0.73	-0.27	0.58	0.4	4	12	3	16	nw	R. B. Montgomery
Mexico	Audrain	800	49	29.6	+ 1.6	60	5†	- 1	31	40	60	3.87	+1.84	2.75	2.3	9	20	0	11	nw	Mrs. Abbie Snoddy
Moberly	Randolph	875	1	30.0†	.....	56	16	- 0	26	43	1	2.88	.....	1.10	0.5	5	14	4	13	sw	McCormick Hospital
Oregon	Holt	1,048	82	30.2	+ 6.1	62	28	- 5	31	47	82	1.19	+0.26	0.87	0.5	4	11	12	8	nw	Miss Mina Wright
St. Charles	St. Charles	520	50	32.4	+ 1.4	64	21	- 5	31	45	60	1.43	-0.72	0.89	0.5	6	12	8	11	sw	Martin L. Comann
St. Joseph	Buchanan	957	28	29.8	+ 4.3	60	28	- 1	31	40	66	1.22	-0.06	0.99	T.	4	12	7	12	nw	U. S. Weather Bureau
Steffenville	Lewis	650	40	29.4	+ 2.0	55	16	- 3	31	47	45	4.11	+2.10	2.10	3.0	6	9	10	12	w	Frank Hall
Tarkio	Atchison	916	35	27.0	+ 4.1	58	5	- 9	31	40	44	0.39	-0.35	0.17	1.0	4	9	7	15	nw	Allert Volker
Trenton	Grundy	822	42	30.2	+ 3.9	58	5	- 3	31	38	43	1.75	+0.41	1.00	0.4	4	12	5	14	sw	W. H. Estes
Unionville	Putnam	1,062	45	27.4	+ 3.9	57	5	- 5	31	44	45	1.55	-0.17	1.45	1.2	2	11	0	20	w	John H. Schick
Warrenton	Warren	816	56	33.0	+ 3.8	62	16	- 1	31	44	48	2.62	+0.43	1.46	3.5	9	8	7	16	nw	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.	574	66	27.6	+ 2.7	54	16	- 2	31	46	66	3.73	+2.17	2.87	2.1	10	10	4	17	nw	U. S. Weather Bureau
<b>Division means</b>	<b>and extremes</b>	.....	..	30.0	+ 3.3	64	21	- 9	31	48	..	2.53	+0.91	3.50	0.7	5	12	6	13	n	..
Southwestern Division																					
Appleton City	St. Clair	813	43	34.0	+ 2.7	65	16	3	31	43	46	2.68	+0.84	1.00	T.	6	19	0	12	sw	Rolla Brown
Bolivar	Polk	1,071	35	35.8	+ 1.9	68	16	3	31	43	43	3.02	+1.09	1.08	T.	7	11	10	10	w	Southwest Baptist College
Boonville	Cooper	650	0	33.5	.....	61	16	1	31	41	61	3.12	+1.40	1.23	T.	7	11	7	13	nw	Boonville Water Dept.
Clinton	Henry	765	45	33.8	+ 2.1	65	16	2	31	44	51	2.84	+0.81	1.64	T.	6	..	..	..	..	U. S. Weather Bureau
Dean	McDonald	1,000	34	36.8	+ 0.9	71	16	2	31	41	39	3.59	+1.06	1.47	T.	6	13	10	8	nw	E. S. Taylor
Eldon	Miller	934	43	31.4†	+ 0.3	60	16†	2	31	47	39	2.96	+1.20	2.24	T.	4	12†	9†	8†	nw	E. H. Shepherd
Garber	Taney	950	4	35.6	.....	75	16	5	31	50	4	3.42	.....	0.91	T.	6	9	8	14	nw	William H. Durham
Harrisonville	Cass	904	60	28.8	+ 1.5	60	28	- 1	31	44	63	2.22	+0.65	1.35	0	4	11	8	12	nw	John H. Patterson
Jefferson City	Cole	557	48	29.6	- 0.2	60	17	1	31	41	56	3.85	+1.87	2.99	T.	7	8	12	11	w	Mrs. Frank Kliegel
Lakeside	Miller	595	7	32.6	.....	65	16	4	31	45	7	3.24	.....	2.23	T.	7	..	..	..	..	W. S. Frame
Lamar	Barton	980	50	34.6	+ 2.5	70	16	5	31	50	57	2.96	+1.13	1.40	0	5	16	6	9	sw	Jesse A. Mann
Lebanon	Laclede	1,265	50	33.9†	+ 1.4	69	16	1	31	46	51	2.77	+0.13	1.07	0	7	10	9	12	nw	Mrs. Rosa E. Montelius
Lexington	Lafayette	688	53	30.8	+ 3.0	59	28	0	31	42	54	1.85	+0.33	1.35	T.	6	14	11	6	uw	Miss Carrie Loomis
Lockwood	Dade	1,078	32	36.4	+ 3.1	69	16	4	31	40	42	3.11	+1.25	1.19	T.	6	17	7	7	nw	Hubert A. Nieman
Marshall	Saline	779	51	33.6	+ 5.7	58	16†	0	31	45	48	2.20	+0.55	1.50	T.	4	19	4	8	nw	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	37	34.6	+ 1.8	71	16	2	31	40	41	5.55	+2.82	1.73	T.	5	17	4	8	nw	Mo. Fruit Exp. Station
Mount Vernon	Lawrence	1,174	26	35.3	+ 2.0	70	16	5	31	45	38	3.77	+1.06	1.25	T.	7	14	4	7	nw	E. S. Roswell
Neosho	Newton	1,011	51	38.2	+ 3.1	72	16	6	31	43	55	2.53	+0.06	0.87	T.	7	20	4	7	nw	U. S. Fisheries Station
Nevada	Vernon	862	45	36.0	+ 4.1	71	16	4	31	41	46	2.85	+1.02	0.80	0	6	14	6	11	sw	T. J. Kaupp
Sedalia	Pettis	910	25	33.7	+ 7.3	63	16	2	31	41	27	2.73	+0.48	1.98	T.	4	19	2	10	n	Mrs. Laura S. Trader
Seligman	Barry	1,542	37	37.8†	+ 2.7	69	16	3	31	41	35	3.68	+0.89	1.87	T.	5	17†	5†	8†	nw	Floyd E. Fawver
Seymour (near)	Webster	1,642	32	34.7	+ 0.7	67	16	2	31	42	32	3.74	+1.15	1.55	T.	5	12	9	10	nw	A. L. Hailey
Springfield	Greene	1,301	50	35.8	+ 2.3	68	16	3	31	49	50	3.14	+0.80	1.52	T.	6	8	13	10	nw	U. S. Weather Bureau
Versailles	Morgan	1,037	11	34.1	+ 0.9	67	16	1	31	48	14	2.48	+0.48	1.14	T.	7	8	9	14	nw	I. M. Wilson
Warrensburg	Johnson	878	51	33.6	+ 4.9	62	16	- 1	31	44	58	2.83	+1.05	1.69	T.	5	14	5	12	sw	E. A. Markey
Warsaw	Benton	687	37	34.4	+ 1.5	68	16	2	31	47	43	2.77	+0.63	0.94	0	7	15	3	13	n	Everett Martin
<b>Division means</b>	<b>and extremes</b>	.....	..	34.2																	



Day of month

Continued on next page



## Daily Precipitation for January 1938—Continued from preceding page

Stations	Drainage-basins	Day of month																															Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Southeastern Div.—Concluded																																	
Bragg City	St. Francis	T.										T.										2.25	.09		.65	.28					T.	.86	4.13
Campbell	do																				.26	1.20	.22	.07	1.08					1.50		4.33	
Cape Girardeau	Mississippi	.34																				1.52	.03		.81	.25				.54	.45	3.94	
Caruthersville	do	.61																				1.68	.34	.03	.80						.62	4.06	
Centerville	Black											.03	T.									.51	1.00		1.09					.71		3.25	
Crystal City	Mississippi																			.03	.09	.49		**	.44	.12				.27		1.44	
Cuba	Meramec																					.95			1.27					.57		2.79	
Dexter	St. Francis																					1.05	.27	T.	T.	1.02				.40	1.20	3.94	
Doniphan	Black										T.	T.										.22	.70		.03	1.05				T.	.80	2.80	
Farmington	St. Francis										T.										.04	1.37	.33		.14	.85	T.				.82	3.55	
Fisk	do	.26										.02	T.									T.	1.23	.21		.69	.53				.27	1.09	4.39
Fredericktown	do				T.																.16	.07	2.05			.93				.72		3.93	
Goodland	Black																					1.55	.38		.05	.69				.65		3.23	
Greenville	St. Francis																					.96	.59			.82				.78		3.15	
Jackson	Mississippi																					.63	.88		.12	.82	T.			1.25	.45	3.70	
Jerome	Gasconade																					.35	.45			2.00				.45		3.25	
Koshkonong	Black																					.50	1.00	.04	.65	.86				.55		3.00	
Leeper	do																					.40	1.62		T.	.75	T.				1.00	.03	3.80
Licking (near)	Gasconade																					1.18	.25			1.50					1.00	3.93	
Marble Hill	Mississippi																					.69	.79		.10	.65				.95		3.18	
Meramec Park	Meramec																				.04	.05	.45			.96	.09	T.		.40		1.99	
Morehouse	Mississippi											T.	T.									.37	.92	.19	.03	1.60	.02			T.	1.04		4.17
New Madrid	do	.14																					.34	.30	.10	.12	.64			T.	.83	2.47	
Owensville	Gasconade				.03							T.									.07	.40	.65			1.79	.48			1.10	1.20	4.44	
Parma	St. Francis																						1.42	.26		.67	.70				.70	.58	3.97
Poplar Bluff	Black	.12																				.11	1.18	.31		.60	.37				.56	2.47	
Richwoods	Meramec																					.01	.85				.55				.49	8.12	
Rolla	do		.03	.01				T.		T.	T.	.01									T.	T.	.94			1.13	1.52	T.			T.	.49	2.4
St. Louis***	Mississippi											.01										.07	.27	.08	T.	.33	.23	.04	T.		.28	1.31	
St. Louis Airport*	Missouri											.02										.04	.14	.07	T.	.36	.38	.03	T.		.24	1.29	
St. Louis University*	Mississippi									.01	T.											.05	.23	.06		.23	.34	.08			.23	1.23	
Salem	Meramec																					T.	1.35	.20		.04	.87				.74	3.20	
Sikeston	Mississippi																						1.05			1.05	.75			.25	1.25	4.35	
Union	Meramec				.03																.08	.27	.04		.17	.96	T.			.25		1.80	
Valley Park	do	.10			T.						T.	T.									.10	T.	.28	T.		.56	.08	T.		T.		1.12	
Van Buren	Black																					1.78				.85	T.				.83	3.46	
West Plains	do										T.											.24	.71	.01	.04	.91	T.			.41	T.	2.32	
Williamsville	do	.10											.01										.14	1.32	.08		.73	.13			.75	.08	3.34
Willow Sprgs. (near)	White	.15										.17										.25	.67			2.21	.02			.54		4.01	
Zalma	Mississippi	.08																					1.51			.86	.17			.92		3.54	
Cairo, Ill.***	do											T.								T.		.78	.66	.12	.41	.76	T.			.01	1.53	4.27	

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. †† Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. T. Trace, or less than 0.01 inch.  
 \*\*\* Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. \*\* Precipitation in the next following measurement; separate dates of fall not recorded. \* Precipitation is for 24-hour period, midnight to midnight † Estimated. ‡ Partially estimated. |||| Incomplete.

Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for January 1938  
 (See precipitation data in table on preceding page)

Station	Data	Day of month																															Monthly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Lakeside (Osage Dam)	Evaporation	.092	.075	.028	****	.049	.098	****	****	****	****	****	****	****	.314	****	.075	†††	.042	.010	.003	†††	.016	.028	..	****	****	****	****	.304	.013	****	1.220
	Mean temperature	38	35	38	34	38	30	21	26	28	35	38	36	35	26	38	42	38	32	31	36	40	46	40	38	18	18	20	38	40	24	16	32.6
	Wind movement	96	47	40	55	87	82	130	92	73	91	52	124	96	132	76	68	57	72	50	66	49	59	40	101	167	172	120	83	121	147	147	2,792

Observations taken at 7.30 a.m. Wind movement corrected to true velocities. For description see April 1932 report.

\*\*\*\* Evaporation included in next measurement. ††† —.001. †††† —.005.

## Continued from page 1

Hail.—Light, on 30th at Hailey, Koshkonong, Mexico, Neosho, Springfield. Moderate, on 29th in western and central Barton County; on 30th at Columbia, Dean, Lockwood, St. Louis University, Salem. Heavy, on 30th at Mount Vernon, Rolla.

Sleet.—9th, 10th, 11th, 18th, 19th, 23d, 24th, 29th, 30th.

Smoke.—Dense, 19th.

Thunderstorms.—Local, 20th, 21st, 23d; more or less general, 29th, 30th.

Windstorms.—23d, 24th, 25th, 29th. Some damage to trees

and sheds at Maryville on the 24th and 25th. On the 24th roof of city hall at Grant City was blown off and minor damage occurred at Kansas City University. On the 29th, about 11.20 p. m., a rather severe and destructive windstorm struck western and central Barton County, doing much damage to houses, barns, outbuildings, trees and wires in the vicinities of Iantha, Liberal, Irwin, and Oaktown. Amount of damage not estimated.

## ERRATA

December 1937, page 59: Highest temperature at Mexico should be 58 on 31st; date of highest temperature at St. Charles should be 30†; precipitation departure at Keokuk, Iowa should be +0.45.

January 1938, page 2: Prevailing wind direction for Northern Division should be nw.



## Daily Temperatures for January 1938

Stations	Day of month																															Mean	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Northern Division																																	
Bethany.....	Maximum...	45	38	40	49	56	46	24	22	35	34	49	38	46	52	54	42	36	36	38	38	52	41	39	25	24	27	57	47	28	22	39.4	
Bethany.....	Minimum...	24	15	26	20	24	22	2	0	18	18	29	25	17	19	17	30	28	28	31	33	32	26	25	3	0	12	15	28	3	5	19.1	
Brunswick §§.....	Maximum...	51	37	44	48	52	33	21	32	38	38	56	39	56	35	51	58	38	38	37	41	40	46	42	44	12	23	25	55	52	21	21	39.5
Brunswick §§.....	Minimum...	29	20	30	21	22	27	9	6	6	22	22	31	19	19	19	20	29	25	27	33	33	35	29	29	10	3	3	14	19	21	0	20.1
Chillicothe §§.....	Maximum...	48	37	42	49	56	33	22	34	37	38	50	34	50	39	51	57	40	36	36	40	37	49	41	35	11	23	26	60	55	20	20	38.9
Chillicothe §§.....	Minimum...	29	11	12	21	23	24	5	1	1	20	28	29	19	21	18	21	29	23	25	31	33	33	27	32	5	2	2	12	21	12	2	18.3
Clifton Hill.....	Maximum...	47	42	35	40	46	36	28	18	35	35	47	42	43	43	48	50	50	36	36	38	40	41	41	40	30	20	20	50	50	50	18	38.9
Clifton Hill.....	Minimum...	27	16	25	19	28	27	6	4	15	20	29	27	19	25	18	36	26	22	30	31	34	34	26	28	6	2	15	13	40	11	2	21.2
Columbia.....	Maximum...	50	39	49	48	57	41	22	22	39	34	43	36	49	40	62	40	40	35	43	42	46	48	47	23	21	25	60	55	54	21	41.3	
Columbia.....	Minimum...	28	22	27	21	32	22	10	8	22	24	34	25	23	25	21	40	29	28	33	34	37	30	29	23	10	1	18	16	41	6	1	23.4
Conception.....	Maximum...	43	35	41	50	55	48	22	21	31	33	47	38	45	40	42	53	42	35	31	35	36	53	38	38	22	20	22	57	53	25	20	37.8
Conception.....	Minimum...	32	15	27	19	28	22	0	2	16	14	20	23	16	19	20	28	20	23	29	29	31	31	30	22	1	1	9	13	24	1	6	17.8
Edgerton.....	Maximum...	49	39	42	51	55	43	28	24	38	38	51	42	46	37	54	61	47	37	36	42	38	56	43	40	26	24	27	58	53	35	19	41.3
Edgerton.....	Minimum...	28	19	31	21	29	26	6	4	19	21	31	24	28	21	22	19	35	30	26	26	33	33	31	29	25	7	4	15	14	35	5	21.8
Elsberry.....	Maximum...	50	39	48	47	57	45	30	21	42	39	43	40	42	41	45	60	54	36	37	46	45	52	45	34	25	30	48	56	52	21	42.8	
Elsberry.....	Minimum...	32	17	19	20	26	25	11	6	9	22	21	31	15	32	16	34	30	29	31	33	36	38	22	32	9	4	5	5	34	19	3	21.5
Fayette.....	Maximum...	52	40	45	50	56	40	25	31	31	32	48	34	50	37	50	60	42	40	36	42	40	50	42	44	32	25	32	56	50	51	22	41.5
Fayette.....	Minimum...	29	20	30	20	28	25	7	6	20	24	28	28	19	24	18	34	29	24	30	31	34	34	28	32	5	1	13	16	41	16	1	22.4
Fulton§§.....	Maximum...	51	41	49	48	57	32	25	36	40	35	42	37	49	32	50	62	38	41	36	45	42	50	46	36	13	23	28	58	51	23	25	40.0
Fulton§§.....	Minimum...	31	21	25	22	29	28	12	9	9	25	25	32	20	27	18	23	30	27	30	33	36	37	27	34	10	4	6	13	22	23	3	22.3
Grant City.....	Maximum...	47	38	42	49	56	41	23	21	32	32	38	38	41	41	50	51	43	34	33	38	46	51	44	39	22	23	23	43	43	25	21	38.6
Grant City.....	Minimum...	26	14	26	17	24	20	1	3	18	13	27	23	15	19	17	26	23	23	30	30	33	33	31	22	2	1	9	9	24	1	8	17.4
Hannibal.....	Maximum...	47	40	46	46	55	45	24	21	37	30	42	39	43	38	45	56	49	34	35	38	39	46	40	44	19	19	21	48	50	1	19	39.3
Hannibal.....	Minimum...	28	14	23	19	28	22	7	3	15	18	28	29	18	28	17	39	28	26	30	32	34	35	27	28	5	1	11	6	40	11	1	20.9
Kansas City.....	Maximum...	48	45	45	51	56	37	22	27	37	40	51	35	48	36	55	58	39	38	37	40	38	57	42	40	20	23	26	60	57	29	22	40.6
Kansas City.....	Minimum...	32	24	28	26	32	20	9	9	26	23	33	29	28	23	25	39	28	26	26	33	35	34	32	20	8	5	18	23	29	3	2	23.5
Kansas City Unlv.....	Maximum...	49	45	45	52	57	46	29	25	36	40	52	45	49	45	55	61	51	39	38	40	40	56	48	42	28	23	27	61	56	44	22	43.4
Kansas City Unlv.....	Minimum...	28	23	32	23	28	26	9	9	20	22	34	28	23	22	24	40	31	26	28	33	35	34	32	27	9	5	18	19	41	9	2	24.0
Kidder.....	Maximum...	46	37	41	48	54	42	23	23	35	35	49	42	47	40	51	56	46	34	34	38	37	50	40	39	27	20	23	55	60	33	18	39.1
Kidder.....	Minimum...	25	16	28	20	27	22	5	2	19	20	31	26	19	22	21	32	28	23	27	31	33	32	29	27	5	2	14	14	33	6	3	26.5
Kirksville.....	Maximum...	45	43	43	48	55	44	26	22	35	28	47	41	45	43	47	56	48	35	35	37	38	43	40	43	28	21	20	51	49	6	3	26.5
Kirksville.....	Minimum...	26	13	21	18	25	20	3	0	14	12	25	23	13	25	13	26	25	31	32	34	32	26	28	3	0	11	7	34	7	4	18.8	
Lawson.....	Maximum...	47	41	41	49	55	47	28	23	39	37	51	42	46	42	51	58	51	34	35	40	38	44	45	40	28	24	27	58	53	40	20	41.4
Lawson.....	Minimum...	27	19	28	21	27	24	5	3	18	21	32	28	20	21	22	38	28	28	31	33	32	29	27	6	2	12	15	39	6	2	21.4	
Louisiana.....	Maximum...	50	42	42	45	50	40	27	20	35	30	42	34	42	40	45	55	40	35	35	40	40	50	45	40	35	20	23	46	50	51	20	39.0
Louisiana.....	Minimum...	30	17	20	19	30	25	10	6	12	20	25	30	14	22	14	36	30	28	30	32	35	35	25	35	9	2	12	3	36	15	1	21.2
Macon§§.....	Maximum...	49	35	43	49	53	32	21	31	39	38	46	34	49	34	48	56	36	37	38	38	41	43	40	35	9	23	23	54	55	18	22	37.7
Macon§§.....	Minimum...	27	15	18	20	25	28	5	1	6	18	19	26	15	23	18	23	25	21	26	31	32	33	25	29	5	1	2	8	20	15	5	17.8
Maryville.....	Maximum...	46	35	41	50	56	40	21	21	28	34	46	38	46	38	51	51	43	31	31	37	37	52	41	38	21	21	22	56	44	25	9	37.4
Maryville.....	Minimum...	23	16	28	18	26	21	1	2	18	15	27	22	16	19	20	30	27	24	29	30	30	32	31	21	2	0	9	12	25	0	7	18.2
Mexico§§.....	Maximum...	51	38	51	50	60	57	24	30	39	35	42	36	48	32	50	60	36	40	36	42	40	48	45	43	15	23	26	43	55	33	22	40.4
Mexico§§.....	Minimum...	28	17	19	19	20	24	9	5	6	19	21	28	19	20	17	20	2															



## Daily Temperatures for January 1938—Continued from preceding page

Stations		Day of month																															Mean	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Southwestern Division—Continued																																		
Nevada	Maximum	53	55	46	49	58	47	33	30	40	42	54	41	53	49	57	71	60	47	39	46	44	42	54	54	31	20	30	57	61	57	22	46.6	
	Minimum	27	25	36	20	30	27	15	15	22	18	35	25	21	27	24	46	30	27	25	33	38	37	31	31	30	14	8	16	21	46	13	4	25.5
Sedalia	Maximum	52	42	44	49	56	49	37	23	38	39	51	43	50	45	51	63	55	40	37	32	41	41	46	50	31	24	29	58	56	23	43.9		
	Minimum	27	22	32	20	29	25	10	8	18	22	32	28	22	24	21	41	29	26	26	32	35	35	30	30	10	4	15	17	42	15	2	23.5	
Seligman	Maximum	51	56	50	47	54	47	38	35	41	44	49	42	49	44	68	69	64	61	56	47	53	...	56	54	32	22	34	56	55	55	39	48.8	
	Minimum	28	30	38	19	28	30	28	16	22	28	29	22	26	27	32	45	33	31	31	37	39	...	40	28	14	5	11	19	43	17	3	26.7	
Seymour(near)	Maximum	56	53	51	45	51	51	30	25	41	39	41	41	45	42	48	67	62	49	50	49	43	56	55	54	30	20	28	56	54	52	26	45.6	
	Minimum	26	23	30	20	28	28	15	10	20	31	28	24	20	26	32	36	31	25	27	30	40	38	35	29	12	6	12	14	37	17	2	23.8	
Springfield	Maximum	49	53	49	41	53	41	27	26	41	38	47	36	47	38	51	68	53	49	47	47	44	55	53	52	25	21	29	58	57	58	26	44.6	
	Minimum	33	33	33	25	32	27	17	17	23	30	30	25	23	26	24	42	32	32	32	40	39	40	42	25	13	6	17	22	45	9	3	26.9	
Versailles	Maximum	52	48	52	50	59	52	28	26	40	40	49	45	52	46	57	67	54	39	37	42	42	50	47	50	30	24	30	62	57	56	25	45.4	
	Minimum	28	20	30	19	32	26	9	6	17	23	29	28	19	21	18	40	27	25	23	31	35	36	30	30	10	4	12	14	46	16	1	22.8	
Warrensburg	Maximum	51	45	42	50	55	51	29	21	38	38	52	43	49	41	51	62	57	41	37	41	40	44	46	45	31	23	28	59	59	55	24	43.8	
	Minimum	28	22	32	23	28	26	10	7	20	19	32	29	23	23	23	42	29	24	24	32	35	35	27	29	10	5	17	17	41	11	1	23.4	
Warsaw	Maximum	52	50	50	48	59	51	28	24	41	41	50	46	52	46	57	68	61	40	38	45	44	46	50	50	31	25	32	60	60	56	25	46.0	
	Minimum	22	19	26	16	30	26	10	6	17	25	31	28	20	25	17	42	28	23	22	32	36	36	29	31	12	5	14	13	44	16	2	22.7	
Southeastern Division																																		
Advance	Maximum	54	48	46	50	58	51	33	32	45	42	41	49	44	40	46	61	58	44	49	44	49	56	53	60	36	28	31	41	55	51	27	45.7	
	Minimum	32	28	21	27	25	30	21	13	23	34	25	30	19	34	23	37	11	34	29	35	44	42	36	34	22	13	14	16	33	27	11	27.6	
Arcadia §§	Maximum	54	50	46	50	59	47	29	32	44	44	36	38	37	44	34	38	66	51	45	48	46	46	62	58	42	20	24	29	45	51	50	26	44.0
	Minimum	33	21	21	22	23	32	16	10	11	23	27	28	17	18	26	62	55	30	30	32	34	39	35	39	16	7	7	9	13	36	5	23.8	
Birch Tree(near)	Maximum	48	47	49	52	57	50	29	26	42	43	37	37	42	40	42	72	59	50	54	48	49	63	59	59	34	26	32	50	46	52	30	45.9	
	Minimum	26	25	25	23	25	29	21	10	19	32	26	26	15	27	16	37	37	29	24	37	40	41	34	34	16	9	13	12	36	22	6	24.3	
Campbell	Maximum	56	53	51	51	60	52	41	38	46	48	43	43	46	42	49	60	64	58	55	47	55	56	61	52	44	33	34	43	59	56	45	49.8	
	Minimum	30	25	26	28	25	32	18	15	21	35	30	29	20	32	21	37	35	31	28	36	44	43	38	34	24	14	14	16	35	30	14	27.8	
Caruthersville §§	Maximum	54	52	49	48	56	50	35	33	47	46	48	42	45	41	48	60	59	43	56	58	56	55	64	56	33	30	33	44	62	55	30	48.1	
	Minimum	33	28	29	27	27	28	21	17	19	24	31	31	21	22	23	24	38	35	31	31	42	45	39	44	25	16	15	18	20	40	16	27.9	
Crystal City §§	Maximum	51	52	49	49	61	39	24	...	33	36	39	35	35	36	...	41	45	40	...	41	45	45	...	58	37	15	22	42	...	...	...	29.9	
	Minimum	28	...	19	20	22	28	15	8	13	...	22	31	15	31	...	31	31	32	32	40	39	...	28	12	6	10	8	...	...	...	5	21.8	
Doniphan	Maximum	58	51	50	55	60	52	37	31	45	45	40	44	46	45	43	61	63	50	55	48	52	60	56	60	36	30	31	36	56	58	29	48.4	
	Minimum	24	20	20	26	19	29	20	9	12	31	24	20	14	34	16	36	41	31	35	37	43	44	38	35	22	13	14	12	33	27	10	25.5	
Farmington	Maximum	53	48	48	48	58	54	32	29	44	41	37	38	43	40	47	62	59	45	41	44	45	56	55	57	34	22	26	41	51	53	24	44.8	
	Minimum	32	22	24	23	29	31	16	12	21	32	26	28	17	80	22	37	34	30	32	33	41	39	35	33	17	7	14	11	34	23	5	25.5	
Goodland	Maximum	51	43	49	48	59	53	31	32	45	42	37	36	46	42	48	68	67	43	63	50	45	59	53	58	30	23	28	48	53	52	29	46.2	
	Minimum	24	17	20	16	17	21	15	3	20	33	21	23	9	28	15	35	33	24	29	32	41	39	30	36	34	6	31	30	30	21	3	21.3	
Greenville	Maximum	52	49	48	49	57	48	34	33	45	41	39	40	44	41	47	61	60	43	49	48	48	61	56	54	36	34	31	45	54	41	29	45.8	
	Minimum	21	16	16	18	15	24	14	4	15	28	20	20	11	27	16	33	28	25	24	36	40	38	32	32	19	10	8	7	26	18	7	20.9	
Jackson	Maximum	58	49	43	46	57	55	36	31	42	41	43	42	43	40	45	58	59	50	45	45	59	51	53	61	38	26	31	40	54	55	38	46.4	
	Minimum	26	24	21	23	19	30	19	11	20	33	27	31	17	32	21	35	36	33	33	34	42	39	30	62	37	10	12	11	28	27	9	25.3	
Koshkonong	Maximum	53	...	52	51	57	52	34	29	42	43	39	39	46	40	47	70	63	51	51	46	50	57	54	58	34	24	33	50	53	56	28	46.7	
	Minimum	33	...	33	34	32	30	23	15	22	32	28	29	16	31	20	37	41	30	30	41	41	42	37	33	17	10	15	18	26	23	7	27.7	
Licking(near)	Maximum	52	50	50	42	57	52	28	26	41	41	40	39	47	41	50	69	58	45	48	45	43	58	56	67	32	23	29	53	52	55	27	45.7	
	Minimum	23	20	25	12	23	27	11	9	19	31	21	26	12	19	16	36	31	24	26	35	40	38	36	32	13	6	11	9	36	18	3	22.2	
Marble Hill	Maximum	58	51	45	53	62	52	34	35	46	41	40	40	40	46	40	60	59	49	48	43	49	60	53	58	35	30	32	44	55	55	28	46.8	
	Minimum	26	23	18	20	22	32	18	7	19	35	26	28	14	32	23	36	37	32	31	35	42	40	31	34	18	10	10	9	31	27	12	25.1	
Poplar Bluff	Maximum	56	52	46	53	59	55	36	36	47	33	43	41	45	45	47	61	62	41	53	45	51	59	60	60	36	31	36	45	58	50	30	48.0	
	Minimum	25	22	21	25	20	27	20	11	23	35	23	25	15	25	18	38	35	33	24	36	41	37	40	35	20	12	14						



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U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

# CLIMATOLOGICAL DATA

19  
**MISSOURI SECTION**  
ROSCOE NUNN  
ST. LOUIS, MO.  
Vol. XLII FEBRUARY 1938 No. 2  
PRICE: 5 CENTS A COPY; 25 CENTS A YEAR

## GENERAL SUMMARY

The last spell of hard winter weather was brief. It occurred on January 30 to February 1, inclusive. Immediately thereafter a remarkable period of mild weather began. This period, February 2 to 13, inclusive, averaged 48° at Kansas City, 51° at Columbia, and 51° at St. Louis, or about 18° to 21° above normal, indicating that this 12-day period was somewhat warmer than any other 12-day period of record in Missouri for the first half of February. The backbone of winter was broken, for there was no unusually cold weather during the remainder of February, although moderately low temperatures prevailed about the 19th to the 25th.

The three winter months (December, January, and February) had an average temperature of 35.5°, which is 2.9° above normal. However, some noteworthy cold spells occurred in November and December, both of which months averaged considerably colder than normal. It was the moderate conditions prevailing in January and the very mild spell of nearly two weeks in February that gave a rather high winter average.

February precipitation was moderate to heavy in the southern half of the State and moderate to very light in the northern half. Amounts decreased from south to north, and ranged from as much as 7 inches in some lower southern counties to less than 0.5 inch in several upper northwestern counties, and to as little as a mere trace at Bethany, Harrison County. In the southern third of the State it ranged from about 5 to 3 inches in most parts; in the middle third, from about 3 to 2 inches, and in the northern third it was mostly less than 2 inches, diminishing gradually to less than 0.5 inch north of Chillicothe and St. Joseph. Thus, the southern and central sections were well supplied, but the more northern portions were still in need of rain to restore normal subsoil moisture.

Streams in much of the southern half of the State overflowed from the rains of the 14-19th. Strong floods occurred in the Black, St. Francis, and Meramec rivers, but without much damage at most points, due largely to the time of year. The Missouri and Mississippi rivers experienced only moderate stages.

Mild weather and ample moisture (except in the upper northwestern counties, where it remained too dry) caused improvement in wheat and other grains, and pastures began to show green. However, wheat was in only fair to good condition at the end of the month; bare spots showed in many fields where germination failed last fall, due to dry weather. Some oats were sown.

## TEMPERATURE

The monthly mean temperature for the State, 81 stations reporting, was 41.4°, or 8.3° above normal. The highest monthly mean was 48.6° at Campbell, and the lowest monthly mean was 33.8° at Conception and Tarkio. The highest temperature recorded was 80° at Mount Vernon on the 13th, and the lowest was 5° below zero at Unionville on the 1st. The greatest daily range was 48° at Tarkio on the 13th.

## PRECIPITATION

The average precipitation for the State, 141 stations reporting, was 3.20 inches, or 1.12 inches more than normal. The greatest

local monthly amount was 7.34 inches at Willow Springs (near), and the least local monthly amount was trace at Bethany. The greatest amount in any twenty-four hours was 3.25 inches at Harrisonville on the 19th. The average number of days with 0.01 inch or more of precipitation was 7. The snowfall averaged 5.0 inches, or 0.1 inch less than normal. The greatest monthly snowfall was 21.0 inches at Warrensburg.  
(Continued on page 10)

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind				Relative humidity			Percentage of sunshine
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12 noon	6:30 p. m.	
Columbia.....	30.16	30.61	1	29.79	19	9.5	21	sw.	5	82	70	69	41
Kansas City.....	30.16	30.58	14	29.72	5	11.4	34	sw.	12	81	70	69	47
St. Joseph.....	30.16	30.60	14	29.68	5	10.1	25	nw.	6	84	66	68	44
St. Louis.....	30.17	30.66	1	29.60	19	14.0	39	sw.	12	83	70	72	35
Springfield.....	30.15	30.53	7	29.73	19	11.5	28	w.	6	84	70	69	40
Cairo, Ill.....	30.19	30.64	1	29.65	19	10.9	27	sw.	19	85	70	67	47
Keokuk, Iowa..	30.18	30.67	1	29.68	26	9.0	26	w.	6	78	68	68	33

## COMPARATIVE DATA FOR FEBRUARY

Year	Temperature			Precipitation					Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy
1888.....	33.0	73	-17	2.22	2.04	2.22	2.39	.....	7	..	..	..
1889.....	29.3	73	-9	2.74	1.80	3.12	3.30	.....	7	..	..	..
1890.....	35.5	81	-8	2.71	1.12	2.04	4.97	.....	7	..	..	..
1891.....	32.7	78	-13	2.45	2.05	2.33	2.96	2.4	6	..	..	..
1892.....	37.7	71	2	4.31	3.47	5.40	4.06	.....	9	7	6	16
1893.....	27.9	65	-20	2.17	2.02	1.49	2.99	4.6	6	10	7	11
1894.....	30.8	72	-12	2.70	2.15	2.01	3.93	11.2	6	10	8	10
1895.....	23.6	77	-26	0.57	0.48	0.55	0.67	3.3	5	10	10	8
1896.....	35.6	81	-10	1.67	1.50	1.22	2.30	4.1	5	12	8	9
1897.....	34.8	74	-15	2.51	1.47	2.79	3.27	8.2	7	7	14	..
1898.....	35.4	78	-9	1.61	1.54	1.47	1.81	0.8	5	13	6	9
1899.....	20.4	72	-32	2.30	1.75	2.06	3.10	5.3	6	12	8	8
1900.....	26.2	70	-16	4.00	3.87	3.35	4.77	16.6	10	10	6	12
1901.....	28.1	76	-19	1.74	1.41	1.51	2.31	7.6	6	13	7	8
1902.....	24.0	72	-17	1.62	0.89	2.10	1.88	5.5	5	11	8	9
1903.....	29.8	74	-25	3.25	1.98	3.34	4.42	5.8	7	11	6	11
1904.....	30.0	82	-18	1.02	0.64	0.63	1.78	1.5	5	11	8	10
1905.....	21.5	69	-40	1.68	1.72	1.69	1.63	13.2	8	11	6	11
1906.....	33.7	73	-13	2.42	2.66	2.17	2.43	4.8	7	15	6	7
1907.....	34.8	77	-15	1.28	0.79	0.92	2.12	4.5	6	12	5	11
1908.....	35.6	78	-7	4.32	2.83	4.20	5.94	4.1	9	13	6	10
1909.....	38.8	71	-4	3.24	2.37	2.52	4.82	3.1	9	13	5	10
1910.....	28.3	72	-24	2.17	0.92	1.89	3.71	10.2	6	13	5	10
1911.....	38.1	87	0	3.78	4.09	3.99	3.27	6.7	8	12	5	11
1912.....	28.3	72	-12	2.51	1.99	2.56	2.98	14.5	6	10	7	12
1913.....	29.8	78	-9	2.15	2.08	2.62	1.75	8.5	7	12	5	11
1914.....	28.3	75	-11	2.80	2.03	2.55	3.83	14.0	7	12	6	10
1915.....	39.4	72	7	3.07	2.48	3.53	3.21	4.1	8	9	5	14
1916.....	31.4	78	-12	0.98	0.79	0.73	1.42	5.0	5	13	6	10
1917.....	30.5	83	-22	0.42	0.16	0.24	0.85	1.4	2	14	7	7
1918.....	34.9	85	-25	1.06	1.25	0.80	1.12	0.6	4	15	6	7
1919.....	35.3	71	-10	1.96	1.98	2.08	1.82	6.4	7	13	4	11
1920.....	34.5	78	-5	0.62	0.33	0.40	1.14	1.2	4	11	6	12
1921.....	40.1	86	5	1.03	0.55	0.74	1.79	1.8	4	14	6	8
1922.....	35.4	80	-5	1.83	1.37	1.62	2.49	1.9	5	14	6	8
1923.....	30.2	75	-9	1.58	0.52	1.26	2.97	1.4	5	13	5	10
1924.....	33.8	79	-5	1.84	1.58	1.92	2.03	8.1	7	14	4	11
1925.....	38.7	78	1	1.88	1.85	1.42	2.37	1.7	6	12	6	10
1926.....	39.4	76	-4	2.07	1.93	1.81	2.46	2.9	6	11	6	11
1927.....	41.3	78	1	1.07	1.07	0.90	1.25	2.3	5	10	8	10
1928.....	37.0	73	-2	2.27	2.18	2.17	2.47	1.8	7	12	6	11
1929.....	25.0	64	-23	1.96	1.31	1.72	2.86	9.4	7	10	5	13
1930.....	44.5	89	-5	1.75	0.95	1.49	2.80	1.3	4	13	8	7
1931.....	40.9	75	-5	2.49	1.46	2.82	3.20	0.3	6	12	6	10
1932.....	42.4	83	-3	1.47	1.00	0.99	2.43	2.0	6	12	7	10
1933.....	32.2	78	-22	1.45	0.74	1.26	2.35	4.2	5	14	7	7
1934.....	32.5	79	-26	1.34	1.00	1.32	1.70	7.0	6	15	6	7
1935.....	37.4	80	0	1.54	1.63	1.45	1.55	0.2	5	10	6	12
1936.....	23.2	78	-25	1.50	1.43	1.33	1.73	4.1	6	12	7	10
1937.....	32.4	74	-15	1.38	1.20	1.46	1.48	3.5	6	11	7	10
1938.....	41.4	80	-5	3.20	1.47	3.60	4.54	5.0	7	8	6	14
Period.....	33.1	89	-40	2.08	1.61	1.96	2.66	5.1	6	12	6	10



## Climatological Data for February 1938

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches					Number of days			Prevailing direction of wind	Observers		
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Length of record, years	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelting	With precip., .01 inch or more	Clear			Partly cloudy	Cloudy
Northern Division																					
Bethany	Harrison	916	43	36.1	+ 8.6	68	12	10	1	30	45	T.	-1.42	T.	T.	0	5	9	14	ne.	A. S. Cumming
Brunswick	Chariton	652	57	37.4	+ 7.6	76	12	-1	1	45	59	1.14	-0.67	0.53	6.2	7	10	1	17	n.w.	O. K. Benecke
Chillicothe	Livingston	779	29	35.3	+ 3.0	70	12	13	1	43	32	1.49	+0.04	0.51	5.0	8	10	8	10	n.w.	Wm. J. Olenhouse
Clifton Hill	Randolph	731	39	37.4	+ 7.2	70	12	13	1	30	29	1.82	+0.08	0.75	7.0	5	3	10	15	s.	Dr. A. J. Bradsher
Columbia	Boone	740	48	40.3	+ 8.6	73	12	15	1	32	48	2.50	+0.46	1.13	12.9	11	5	7	16	s.	U. S. Weather Bureau
Conception	Nodaway	980	49	33.8	+ 5.6	68	12	7	1	42	54	0.45	-0.70	0.16	2.2	4	5	11	12	n.w.	Fr. Adelhelm Bess
Edgerton	Platte	856	18	37.4	+ 3.1	71	12	20	34	27	0.58	-0.76	0.27	3.5	5	13	1	14	n.	Fred L. Stiff	
Elsberry	Lincoln	449	7	41.7	.....	77	12	13	1	34	7	2.34	.....	0.74	7.9	7	7	5	8	n.	Ray E. Mills
Fayette	Howard	680	58	39.2	+ 8.6	72	12	14	25	30	55	2.27	+0.57	1.20	13.6	7	5	4	19	sw.	Morrison Observatory
Fulton	Callaway	818	50	39.9	+ 6.8	74	12	4	1	39	46	3.00	+1.33	0.98	11.5	10	9	6	13	sw.	Clyde C. Herring
Gorin	Scotland	700	.....	.....	.....	69	5	.....	.....	51	1.19	.....	-0.21	0.54	3.5	5	10	4	14	n.w.	W. L. Harker
Grant City	Worth	1,134	34	34.4	+ 5.8	69	5	8	18	36	46	0.30	-0.81	0.13	2.0	3	4	8	16	se.	Howard Rybolt
Hannibal	Marion	759	46	38.8	+ 9.1	71	12	12	1	33	54	1.95	+0.09	0.83	9.4	6	5	3	20	se.	Hannibal Water Dept.
Kansas City	Jackson	741	49	38.1	+ 6.9	71	12	14	19	33	49	0.90	-0.85	0.40	4.9	8	5	5	18	sw.	U. S. Weather Bureau
Kansas City University	Jackson	908	0	38.8	.....	70	12	14	19	31	0	1.20	.....	0.56	7.0	6	8	3	17	n.w.	University of Kansas City
Kidder	Caldwell	1,020	46	36.2	+ 7.8	70	12	11	18	34	50	0.65	-0.89	0.25	2.8	5	6	6	16	n.w.	Roscoe L. Terry
King City	Gentry	1,095	.....	.....	.....	69	12	10	.....	.....	12	0.38	-1.12	0.30	0.8	3	3	7	16	ne.	John M. Martin
Kirksville	Adair	969	49	36.2	+ 9.1	68	12	13	1	36	56	0.92	-0.61	0.44	5.0	5	7	6	15	n.	Charles Noble
Lawson	Ray	1,050	0	37.1	.....	70	12	13	1	29	0	1.19	.....	0.43	4.6	7	5	7	16	ne.	Elmer E. Lamb
Linn	Linn	816	.....	.....	.....	75	12	13	1	36	6	1.24	.....	0.67	3.2	6	6	5	17	n.w.	H. D. Taggart
Louisiana	Pike	469	44	39.8	+ 8.9	75	12	13	1	36	57	1.92	-0.16	0.60	9.8	8	13	4	11	w.	Stark Bro's Nurseries
Macon	Macon	875	39	36.0	+ 6.4	71	12	-1	1	44	45	1.52	-0.18	0.60	4.5	6	8	6	14	n.	Mrs. W. C. Brown
Maryville	Nodaway	1,169	48	34.0	+ 8.2	70	5	6	18	36	44	0.49	-0.94	0.19	2.8	6	7	3	18	nw.	R. B. Montgomery
Mexico	Audrain	800	49	37.8	+ 7.7	70	5	1	1	41	60	2.16	+0.31	0.60	16.3	7	.....	.....	.....	.....	Mrs. Abbie Snoddy
Moberly	Randolph	875	1	37.6	.....	71	12	11	1	31	1	1.65	.....	0.60	7.5	6	.....	.....	.....	.....	McCormick Hospital
Oregon	Holt	1,048	82	35.8	+ 7.0	70	12	7	18	35	82	0.67	-0.70	0.27	6.0	4	9	10	9	nw.	Miss Mina Wright
St. Charles	St. Charles	520	50	41.7	+ 8.4	78	12	6	1	42	60	3.05	+1.06	1.05	0.7	9	9	5	13	se.	Martin L. Comann
St. Joseph	Buchanan	957	28	36.2	+ 6.6	69	12	12	18	38	66	0.46	-1.21	0.20	1.1	7	7	9	12	n.w.	U. S. Weather Bureau
Steffenville	Lewis	650	40	38.2	+ 8.5	70	12	10	1	32	45	1.49	-0.28	0.55	6.5	6	6	11	11	n.	Frank Hall
Tarkio	Atchison	916	35	38.8	+ 4.8	70	5	1	18	48	44	0.89	-0.39	0.42	7.0	4	9	8	11	sw.	Albert Volker
Trenton	Grundy	822	42	37.0	+ 7.6	69	12	11	1	31	43	0.94	-0.64	0.36	1.5	5	3	11	14	n.	W. H. Estes
Unionville	Putnam	1,062	45	35.0	+ 8.3	68	12	-5	1	47	45	0.61	-1.16	0.40	1.0	3	6	1	21	e	John H. Schick
Warrenton	Warren	816	56	41.9	+11.0	75	12	13	1	32	48	3.30	+1.41	1.00	6.5	9	4	8	16	se	Prof. A. W. Ebeling
Keokuk, Iowa	Lec. Ia.	574	66	37.0	+ 8.7	71	12	10	1	36	66	1.86	+0.31	0.59	10.7	9	3	5	20	e.	U. S. Weather Bureau
Division means and extremes		.....	.....	37.4	+ 7.4	78	12	-5	1	48	.....	1.47	-0.14	1.20	5.7	6	7	6	15	n.w.	.....
Southwestern Division																					
Appleton City	St. Clair	813	43	40.6	+ 6.7	75	11	11	20	33	46	2.87	+1.20	1.15	12.8	7	9	2	17	ne.	Rolla Brown
Bolivar	Polk	1,071	35	43.6	+ 8.4	75	11	19	20	31	43	3.08	+0.98	0.77	4.5	8	5	9	14	sw.	Southwest Baptist College
Boonville	Cooper	650	0	39.8	.....	74	12	15	25	34	61	2.45	+0.67	1.46	11.2	8	7	8	13	s.	Boonville Water Dept.
Clinton	Henry	765	45	40.6	+ 7.0	73	11	13	23	33	51	3.14	+1.19	1.79	19.0	7	.....	.....	.....	.....	U. S. Weather Bureau
Dean H.	McDonald	1,000	34	45.7	+10.0	74	11	16	19	40	39	5.59	+3.81	1.90	1.0	8	11	4	13	s.	K. S. Taylor
Eldon	Miller	934	42	40.2	+ 7.1	75	11	2	1	42	39	2.96	+1.14	1.26	9.0	7	5	13	10	s.	E. H. Shepherd
Garber	Taney	950	4	45.6	.....	78	11	5	1	44	4	5.41	.....	1.50	1.0	8	3	5	29	ne.	William H. Durham
Harrisonville	Cass	904	60	35.4	+ 4.7	69	11	1	1	41	63	4.18	+2.45	3.25	18.8	5	7	6	15	n.	John H. Patterson
Jefferson City	Cole	557	48	38.4	+ 6.8	70	12	1	1	40	56	3.76	+2.00	0.96	12.5	9	11	8	9	w.	Mrs. Frank Kliegel
Lakeside	Miller	595	7	41.4	.....	74	11	5	1	45	7	3.00	.....	0.89	.....	9	.....	.....	.....	.....	W. S. Frame
Lamar	Barton	980	50	42.0	+ 6.7	76	11	5	1	46	57	2.95	+1.18	0.85	4.0	4	7	5	16	nw.	Jesse A. Mann
Lebanon	Laclede	1,265	60	42.1	+ 7.7	75	10	16	1	37	51	3.89	+1.70	1.00	7.8	9	5	8	15	s.	Mrs. Rosa E. Montelius
Lexington	Lafayette	688	53	37.2	+ 6.2	71	12	2	1	42	54	1.79	-0.05	0.70	8.5	8	12	7	9	s.	Miss Carrie Loomis
Lockwood	Dade	1,078	32	44.0	+ 7.0	75	11	19	20	32	42	3.53	+1.80	0.90	7.0	6	8	12	sw.	Hubert A. Nieman	
Marshall	Saline	779	51	39.4	+ 8.5	72	12	8	1	31	48	2.42	+0.64	1.20	14.2	7	9	9	10	sw.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	37	43.9	+ 8.8	74	11	14	1	32	41	5.95	+3.72	1.44	2.0	9	8	12	se.	Mo. Fruit Exp. Station	
Mount Vernon	Lawrence	1,174	26	45.4	+10.9	80	13	19	19	42	38	4.82	+2.22	1.20	3.0	7	13	6	9	uw.	G. H. Boswell
Neosho	Newton	1,011	51	45.8	+ 8.2	76	11	16	19	38	55	4.14	+2.15	1.14	2.0	8	14	5	9	nw.	U. S. Fisheries Station
Nevada	Vernon	862	45	42.5	+ 8.6	76	11	17	19	32	46	2.23	+0.48	1.00	6.0	4	7	6	15	sw.	T. J. Kaupp
Sedalia	Pettis	910	25	40.7	+10.3	72	12	14	25	32	27	3.04	+0.90	1.80	17.0	6	11	3	14	s.	Mrs. Laura S. Trader
Seligman	Barry	1,542	37	44.9	+ 7.4	72	11	11	1	37	35	7.29	+5.45	2.24	2.0	8	10	6	11	e.	Floyd E. Fawver
Seymour (near)	Webster	1,642	32	43.4	+ 8.4	71	10	15	1	32	32	4.83	+2.65	1.19	4.0	9	8	8	12	s.	A. L. Hailey
Springfield	Greene	1,301	50	43.8	+ 8.6	73	11	18	1	27	50	4.53	+2.18	1.67	6.0	10	5	9	14	s.	U. S. Weather Bureau
Versailles	Morgan	1,037	11	41.3	+ 7.1	75	11	16	1	32	14	2.66	+1.09	0.90	6.6	8	5	7	16	sw.	I. M. Wilson
Warrensburg	Johnson	878	51	39.5	+ 7.0	71	11	14	24	32	58	2.95	+1.07	2.00	21.0	6	6	9	13	sw.	E. A. Markey
Warsaw	Benton	687	37	42.0	+ 6.4	76	11	16	23	36	43	2.93	+0.69	1.30	16.0	8	6	5	17	s.	Everett Martin
Division means and extremes		.....	.....	41.9	+ 7.7	80	13	1	1	46	.....	3.60	+1.64	3.25	8.7	7	8	7	13	s.	.....
Southeastern Division																					
Advance	Stoddard	855	1	47.0	.....	76	11	18	1	33	1	3.86	.....	1.18	T.	9	.....	.....	.....	.....	U. S. Weather Bureau
Aradale	Iron	926	57	42.6	+ 8.5	75	12	5	1	40	60	5.21	+2.73	1.94							



Daily Precipitation for February 1938

Stations	Drainage-basins	Day of month																																Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	..	..	..		
Northern Division																																		
Amity III	Grand			.01		T.	.10				T.	T.		T.		.10	.27	.15	.04			.02											0.69	
Bethany	do					T.	T.				T.					T.	T.	T.															T.	
Bowling Green III	Mississipp											.02					.14	.35	.73	.57	.13		.02										1.96	
Brunswick II	Grand																.07	.14	.27	.53	.05		.06	.02									1.14	
Canton I	Mississipp			.01			T.					.06	T.				.01	.43	.19	.39	.22		.14										1.47	
Chillicothe	Grand					.26	.06					T.	T.	.01	T.		.02	T.	.51	.23	.28		.12										1.49	
Clifton Hill	Chariton										T.	T.				.10	.62			.75		.13											1.82	
Columbia	Missouri			.01						.02	.10	.15				.18	.41	.28	.18	.12		.03	.02										2.50	
Conception	do			T.		T.					T.					.09	.14	.16					.06										0.45	
Edgerton	Missouri			T.		T.					T.					.05	.06	.27	T.	.14			.06										0.58	
Edina	Mississipp			T.			.14			T.		T.					.50	.18	.41	T.			.13				T.	T.					1.36	
Elsberry	do									.04						.04	.14	.65	.74	.64		.09											2.34	
Farber	do			T.		.02				T.		T.				.01	.16	.38	.52	.90	.30		.15										2.44	
Fayette	Missouri			T.							.10	T.				.10	.05	.55	.15	.20		.12											2.27	
Fillmore	do					.03					.13	.09	.06			T.	.20	.52	.85	.78	.20	.14											3.00	
Gallatin II	Grand						.35									.05	.05		.34	.21		.05	T.										1.05	
Gorham	Mississipp			T.		T.	.12				T.						.54	.21	.12			.20				T.	T.						1.19	
Grout City	Grand			T.							T.	T.	T.			T.	.13	.11	T.			.06											0.30	
Hannibal	Mississipp									.15	T.						.02	.54	.33	.83			.08										1.95	
Hermann II	Missouri										.04	.11	.08				.37	.60	.71	.78	.07	.12											2.83	
Kahoka	Mississipp					T.	.09		T.	.06							.20					.07	.07										0.67	
Kansas City	Missouri			T.		T.				T.	T.	.05	T.			.05	.08	.35	.20	.08		.07	.11										0.90	
Kansas City University	do			T.		T.				T.	T.	.12	T.			T.	.09	.28	.04	.56		.02	.02										1.20	
Kidder III	Grand			T.													.06	.30				.03											0.65	
King City	Missouri															T.	.06	.30				.02											0.38	
Kirkville	Mississipp					.06					T.							.44	.05	.21		.16											0.92	
LaBelle	do						.10										.49	.21	.63			.20	T.										1.63	
Lawson	Missouri					.16					T.					.15	.03	.43	.02	.31		.09											1.19	
Linneus III	Grand			T.			.19				T.						.03	.47	.20	.28	T.	.07	T.										1.24	
Louisiana	Mississipp			.05							.03						.18	.40	.60	.48		.18											1.92	
Lucerne III	Grand			.03		.01		T.				.02					T.	.20	.05			.08	T.										0.39	
Macou II	Chariton											.16					.05	.60	.20	.37		.14											1.52	
Madison III	Mississipp											.02					.14	.37	.37	.66	.30		.10										1.96	
Maryville	Missouri			.01							T.	T.	T.			.08	.11	.19	.02			.08											0.49	
Memphis III	Mississipp					.65						T.	T.	T.			T.	.47	.17	.04	T.		.12	T.									1.45	
Mexico II	do										.08	.01					.20	.52	.60	.60		.15	T.										2.16	
Milan I	Grand			.12			.56	.07				.08					.06	.21		.12		.09											1.31	
Moberly	Mississipp										T.						.04	.49	.22	.59		.09											1.65	
Monroe City	do										.14						.20	.60	.15	.60		.10											1.57	
New London III	do																.04	.49	.22	.59		.09											2.01	
Oregon	Missouri			T.		T.					T.					.15	.15	.10		T.		.24											0.67	
Palmyra III	Mississipp										T.						T.	.45	.24	.19	.70	.06											1.76	
Paris	do										.12						.09	.28	.34	.68	.43	.12											2.04	
Perry	do										.10						.05	.35	.32	.50	.30	.20											1.82	
Philadelphia III	do										.10							.44	.50	.42	.15	.02											1.63	
St. Charles	Missouri										.05	.17	.03				.26	.80	1.05	.58	.03	.08											3.05	
St. Joseph	do			T.		T.	T.				T.					.11	.14	.13	.03	.03		.01	.01			T.							0.46	
Shelbina	Mississipp										.07						.05	.57	.25		.50	.10											1.54	
Shelbyville	do										.18							.57	.27	.40		.12											1.64	
Steifenville	do																.04	.55	.25	.45		.12											1.49	
Tarkio	Missouri										T.	.08					.42	.22				.20											0.89	
Trenton	Grand			T.		.36						.01					.05	.42	.22			.09											0.94	
Troy	Mississipp										.04	.10	.02				.06	.25	.60	.66	.65	.06	.12										2.56	
Unionville III	Chariton										.15						T.	.40				.06											0.61	
Warrenton	Mississipp									.06	.13	.06				.20	.30	.75	1.00	T.		.05											3.30	
Keokuk, Ia.	do			.04		.39					.20	T.	T.			.05	.41	.07	.56		.03	.11	T.										1.86	
Southwestern Division																																		
Altona	Osage					T.					T.					.04	.10	.55	.40	.65		T.											1.74	
Appleton City	do				.15						T.					.61	.12	.71	.07	1.15		.06											2.87	
Bolivar	do			.04			.34				T.	T.				.67	.24	.77	.46	.51		.05											3.08	
Boonville	Missouri			T.						.01	.12	.0																						



## Daily Precipitation for February 1938—Continued from preceding page

Stations	Drainage-basins	Day of month																															Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	..	..	..	
Southeastern Div.—Con- cluded																																	
Birch Tree (near).....	Black.....						.25				.05				.65	.95	.51	1.15	1.95	.30				.15									5.96
Bragg City [    ].....	St. Francis.....						.11				T.				.60	1.60	.52	.21	2.47	.21			.44										6.16
Campbell.....	do.....						.15								.42	1.28	.09	2.20	1.40	.22			.15										5.91
Cape Girardeau [    ].....	Mississippi.....				T.			.08			.01	.35			.14	.05	.22	.40	.98	.33	.04		.10										2.70
Caruthersville [    ].....	do.....										.13				.95	1.85	.27	.36	1.55	.61			.24										5.96
Centerville [    ].....	Black.....						.17				.42	.06			.42	.27	1.00	1.00	2.00	.44													5.78
Crystal City [    ].....	Mississippi.....						.24				.04	.32			T.	.05	.28	.98	1.96	.47	.02		.12			.01							4.49
Cuba [    ].....	Meramec.....						.33					.30					.40	1.25	1.20	.42													3.90
Dexter [    ].....	St. Francis.....						.03	.09			.01	T.			1.04	.40	.65	1.45	.35	.08			.05										4.15
Douglas.....	Black.....						.04				T.	T.			.45	.95	.08	1.46	1.95	.22			.12										5.27
Farmington.....	St. Francis.....				T.		.07				.33				.19	.45	.65	.60	1.58	.34			.05		T.								4.26
Fisk [    ].....	do.....				T.		.07				.07				.22	.14	.98	1.27	1.78	.21	.11		.04	.07									4.93
Fredericktown [    ].....	do.....										.10	.55			.21		.51	.55	1.38	.32	.18		.06										3.86
Goodland.....	Black.....						.23				.25				.71	.88	.80	1.95	.40					.14									5.00
Greenville.....	St. Francis.....						.25				.25				1.20	.21	.89	.11						.14									2.80
Jackson.....	Mississippi.....						.10				.51				.59	.49	.19	.79	1.93	.40			.52		T.								5.52
Jerome [    ].....	Gasconade.....						.40				.18				.10	.60	.90	1.50	.70	T.			T.										4.38
Koshkonnong.....	Black.....						.28								1.50	.15	1.40	1.90	.30				.15										5.68
Leeper [    ].....	do.....						.04				.12	.13			.53	.45	.57	.75	1.63	.32	T.		.12										4.66
Licking (near).....	Gasconade.....						.32				.15				.30	.50	.58	1.00	1.10	.32													4.27
Marble Hill.....	Mississippi.....					.15	.80				.25				.65	.45	.20	.60	1.35	.35													4.80
Meramec Park [    ].....	Meramec.....						.30				.40	.05				.57	.97	1.32	.63	T.			.04										3.26
Morehouse.....	Mississippi.....						.02				T.				.21	.32	.02	1.34	1.02	.23			.10										3.26
New Madrid [    ].....	do.....				T.	.25					.10	.01			.18	.21	.16	.23	.79	.64	.12		.17										2.86
Owensville [    ].....	Gasconade.....						.12				.21	.49				.42	.68	1.04	1.04	.08	T.		.14										4.18
Pacific [    ].....	Meramec.....						.20				.50	.25	.05			.46	1.03	1.10	.55	.02			.10		T.	T.							4.26
Parma [    ].....	St. Francis.....						.25				.25				.35	.45	.48	.46	2.82	.32			.18										5.31
Poplar Bluff [    ].....	Black.....						.13				T.				.80	.43	.92	1.75	.35	T.			.15										4.53
Richwoods [    ].....	Meramec.....						.60				.20				.10	.60	.25	1.05	.45	.02			.01										3.28
Rolla.....	do.....						.42				T.	.14	.01		.42	.71	1.34	.78	.48	T.			.10		T.	T.							4.40
St. Louis***.....	Mississippi.....		T.	T.			.25				.03	.10	.02		.28	.57	1.37	.29	.48	T.	.10	.02		.02									3.51
St. Louis Airport*.....	Missouri.....		T.			T.	T.				.02	.10	.22		.34	.33	1.46	.23	.54	T.	.06	.03		.01	T.								3.34
St. Louis University*.....	Mississippi.....					T.	.19				.05	.10	T.		.37	.32	.97	.88	.37				.09		.02								3.36
Salem.....	Meramec.....						.30				.40				.46	.52	.70	1.15	.95	.34			.12										4.94
Sikeston [    ].....	Mississippi.....										.10				.50	.18	.42	.23	1.70	.60			.10										3.83
Union.....	Meramec.....						.12				.50				.23	.46	1.14	.95	.50				.09										3.99
Valley Park [    ].....	do.....						.10				.12	.25	.35		T.		.65	.85	1.26	.60	T.	T.	.10		T.	T.							4.28
Van Buren.....	Black.....						.21				.26					.85	.80	1.60	.30	.34			T.										4.70
West Plains.....	do.....				T.		.12								.54	1.18	.41	.98	2.30	.33		T.	.04		T.								5.90
Williamsville [    ].....	do.....						.21				.22				.73	.61	.38	.83	1.98	.35	.03		.15										5.49
Willow Sprgs. (near) [    ].....	White.....						.24								.86	.81	1.47	1.48	1.84	.59			.05										7.34
Zalma [    ].....	Mississippi.....							.22			.16				.70	.57	.11	.95	1.31	.31													4.33
Calro, Ill.***.....	do.....		T.				.10				.09	T.			.20	.28	.11	1.12	.70	.09	T.	.07	.12		T.	T.							2.88

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. || Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. T. Trace, or less than 0.01 inch.

\*\*\* Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. \*\* Precipitation in the next following measurement; separate dates of fall not recorded. \* Precipitation is for 24-hour period, midnight to midnight † Estimated. ‡ Partially estimated. ||||| Incomplete.

Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for February 1938  
(See precipitation data in table on preceding page)

Station	Data	Day of month																												Monthly			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28		..	..	..
Lakeside ..... (Osage Dam)	{ Evaporation .....	....	....	.283	.035	.071	.137	.123	.107	.128	.058	.021	.063	.131	.122	.089	††††	††††	....	....	....	....	.032	....	....	....	.179	.050	.123	....	....	....	1.749
	{ Mean temperature ..	24	36	44	49	58	52	42	48	56	46	56	60	62	41	33	40	42	32	28	28	30	32	30	28	34	40	48	40	..	..	..	41.4
	{ Wind movement ..	42	98	76	16	98	106	43	49	76	72	27	35	92	70	54	62	36	63	60	82	17	42	48	101	73	104	76	49	..	..	..	1.767

Observations taken at 7.30 a. m. For description see April 1932 report.

\*\*\*\* Evaporation included in next measurement. †††† —.001. †††† —.002.

Continued from page 7

MISCELLANEOUS PHENOMENA

Floods.—In Black river 18th to 22d; in Bourbeuse river 19-20th; in Meramec river 18th to 22d; in St. Francis river 18th to 25th.

Fog.—Dense, 3d, 4th, 10th, 12th, 15th, 16th, 17th, 18th, 21st.

Glaze.—15th, 16th, 17th, 18th, 21st.

Halos.—Solar, 1st, 7th, 8th, 14th, 27th; lunar, 7th, 8th, 12th, 13th.

Hail.—Light, on 6th at Lockwood, 11th at Kansas City (south of 55th street); heavy, on 6th at Amity and Rolla.

Sleet.—13th, 15th, 16th, 17th, 18th, 19th, 21st, 22d.

Smoke.—Dense, 7th.

Thunderstorms.—Local, 5th, 10th, 13th, 14th; more or less general, 6th, 11th, 17th.

Windstorms.—No damaging winds reported.



## Daily Temperatures for February 1938

Stations	Day of month																												Mean			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28		..	..	..
Northern Division																																
Bethany.....	Maximum	37	45	45	59	66	60	50	67	62	37	48	68	65	36	33	32	34	30	27	35	32	35	30	35	45	52	58	54	..	..	45.6
Bethany.....	Minimum	10	32	18	35	51	34	20	38	36	26	33	40	36	17	26	26	30	15	14	15	22	26	17	18	15	34	36	26	..	..	26.6
Brunswick §§.....	Maximum	43	47	45	63	71	54	55	72	60	42	58	76	64	42	37	35	43	30	31	32	31	37	33	33	38	56	59	51	..	..	47.8
Brunswick §§.....	Minimum	-1	16	26	25	41	42	26	27	42	31	34	39	56	24	23	27	29	23	21	25	21	26	20	19	18	16	34	29	..	..	27.1
Chillicothe §§.....	Maximum	40	46	43	62	65	47	51	68	62	39	55	70	51	40	30	34	36	27	28	32	31	38	33	35	44	58	53	45	..	..	45.6
Chillicothe §§.....	Minimum	-3	15	21	22	41	36	24	29	39	28	36	37	51	18	19	25	28	18	18	22	25	21	18	17	18	37	26	..	..	25.0	
Clifton Mill.....	Maximum	37	43	44	62	61	61	47	67	63	43	54	70	67	48	37	32	36	37	28	29	29	31	31	30	34	44	52	52	..	..	45.3
Clifton Mill.....	Minimum	13	35	22	32	52	38	25	42	42	29	38	48	45	21	26	26	31	22	24	22	18	24	28	20	14	32	33	28	..	..	29.6
Columbia.....	Maximum	43	49	47	67	67	62	55	68	64	45	61	73	68	44	36	37	48	33	30	31	32	36	33	31	38	45	57	47	..	..	48.1
Columbia.....	Minimum	15	42	28	39	56	37	29	46	35	34	45	58	36	27	28	28	33	27	25	25	28	27	20	24	17	35	34	32	..	..	32.5
Conception.....	Maximum	39	45	43	60	64	63	58	66	59	34	43	68	65	35	34	30	32	23	30	38	28	34	34	32	45	47	54	54	..	..	44.9
Conception.....	Minimum	7	28	17	31	33	30	26	36	32	23	30	26	31	15	22	25	22	7	11	16	21	21	16	15	14	20	34	26	..	..	22.7
Edgerton.....	Maximum	41	47	45	63	68	61	53	67	63	39	56	71	66	40	37	33	33	26	32	35	31	39	33	36	43	60	59	52	..	..	47.5
Edgerton.....	Minimum	15	38	21	35	51	36	22	39	37	28	35	37	36	19	27	27	25	15	14	12	17	19	20	20	18	35	36	27	..	..	27.3
Elsberry.....	Maximum	35	49	61	60	71	66	53	65	69	50	61	77	74	50	40	34	58	46	34	34	33	37	36	36	37	48	56	52	..	..	50.8
Elsberry.....	Minimum	13	32	27	32	50	47	23	32	49	36	38	47	48	28	26	28	33	32	30	26	28	29	28	26	26	36	36	24	..	..	32.6
Fayette.....	Maximum	37	45	47	64	67	61	54	68	61	45	60	72	68	49	39	34	41	38	30	31	31	35	31	30	36	45	56	52	..	..	47.5
Fayette.....	Minimum	15	36	25	34	51	41	26	40	45	31	41	53	41	24	27	27	32	24	24	24	26	26	19	21	14	34	36	30	..	..	31.0
Fulton §§.....	Maximum	38	48	50	68	69	51	56	66	65	46	65	74	68	46	32	48	52	33	33	31	33	36	34	30	37	45	57	48	..	..	48.6
Fulton §§.....	Minimum	4	22	29	29	48	46	25	38	45	36	38	46	57	27	28	28	31	30	29	26	28	29	21	23	19	24	36	32	..	..	31.2
Grant City.....	Maximum	37	44	42	59	69	61	50	65	62	34	42	67	65	34	30	30	31	24	29	36	31	35	33	35	45	55	55	52	..	..	44.7
Grant City.....	Minimum	9	30	16	33	50	34	20	37	30	24	31	39	29	16	23	25	22	8	11	14	22	19	15	17	12	34	34	25	..	..	24.2
Hannibal.....	Maximum	34	47	41	64	66	64	54	64	61	41	52	71	68	45	35	33	44	39	30	30	28	38	32	34	36	48	53	47	..	..	46.5
Hannibal.....	Minimum	12	31	28	31	55	40	29	41	40	33	34	46	45	23	25	27	32	26	28	24	24	26	26	24	20	33	36	29	..	..	31.0
Kansas City.....	Maximum	44	49	47	65	67	60	56	68	61	43	54	71	65	40	34	33	34	26	29	31	30	35	29	34	40	59	59	52	..	..	47.0
Kansas City Univ.....	Maximum	18	31	25	38	57	34	27	46	31	30	38	41	32	23	28	28	21	17	14	18	25	24	23	21	21	35	37	31	..	..	29.2
Kansas City Univ.....	Minimum	42	48	46	65	68	63	57	68	65	43	58	70	67	42	38	32	34	28	28	31	29	36	32	34	39	58	59	53	..	..	47.6
Kidder.....	Maximum	16	39	24	36	55	40	26	42	42	30	38	42	41	23	28	28	27	16	14	17	24	24	21	20	17	34	41	32	..	..	29.9
Kidder.....	Minimum	37	46	46	61	65	59	50	67	62	38	51	70	69	38	38	31	36	30	30	31	35	32	36	37	53	57	50	..	..	45.9	
Kirksville.....	Maximum	12	35	20	32	45	34	25	37	34	27	34	38	35	18	25	26	28	11	16	17	24	22	19	18	16	34	35	24	..	..	26.5
Kirksville.....	Minimum	33	45	43	59	62	61	51	65	64	36	48	68	68	38	32	33	37	35	29	33	29	34	34	33	39	55	54	50	..	..	45.3
Kirksville.....	Minimum	10	32	23	23	49	37	22	36	36	29	32	40	34	20	20	25	31	18	22	18	24	24	20	17	34	35	27	..	..	27.2	
Lawson.....	Maximum	38	45	45	62	63	60	52	67	62	39	55	70	65	39	36	32	33	29	29	30	30	36	32	37	41	57	59	51	..	..	46.2
Lawson.....	Minimum	13	35	21	33	52	36	28	40	39	27	36	43	38	19	26	25	28	16	15	17	23	22	20	19	17	34	36	27	..	..	28.0
Louisiana.....	Maximum	33	50	46	62	66	58	52	65	60	57	53	75	70	52	36	33	40	40	30	33	33	35	35	35	36	45	50	50	..	..	47.5
Louisiana.....	Minimum	13	32	30	26	52	42	25	38	55	40	35	48	48	26	26	32	30	30	25	27	28	26	26	24	33	28	24	..	..	32.0	
Macon §§.....	Maximum	43	46	48	62	66	49	54	67	60	37	61	71	65	40	29	35	45	30	32	35	30	36	31	34	37	53	57	48	..	..	46.5
Macon §§.....	Minimum	-1	13	22	24	37	36	25	27	43	28	32	35	59	20	18	24	27	22	20	21	18	23	23	20	16	20	34	27	..	..	25.5
Maryville.....	Maximum	40	44	41	61	70	56	50	68	58	35	42	69	64	35	30	30	30	22	30	36	29	34	31	32	43	53	55	48	..	..	44.1
Maryville.....	Minimum	9	30	15	33	50	32	24	35	30	23	30	40	28	15	23	25	19	6	10	15	21	22	15	15	14	33	32	26	..	..	23.9
Mexico §§.....	Maximum	32	48	48	67	70	53	57	66	64	44	62	70	68	48	38	40	54	34	30	36	38	39	33	36	38	48	63	48	..	..	49.0
Mexico §§.....	Minimum	1	15	22	26	38	42	25	28	42	22	36	41	55	23	23	25	19	26	25	22	25	25	20	22	15	16	33	29	..	..	26.5
Moebury.....	Maximum	37	45	45																												



\* , b , etc., indicate respectively 1, 2, 3, etc., days missing from the record to the preceding day, on which it almost always occurs. † Estimated.



7.05  
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U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

# CLIMATOLOGICAL DATA

## MISSOURI SECTION

ROSCOE NUNN  
ST. LOUIS, MO.

VOL. XLII

MARCH 1938

No. 3

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR

### GENERAL SUMMARY

The average temperature for the State,  $53.6^{\circ}$ , is the third highest March average since State-wide records began, in 1888, the highest being  $55.8^{\circ}$  in 1910 and the second highest,  $53.9^{\circ}$  in 1907. The temperature was in strong contrast with March a year ago, when it averaged  $13^{\circ}$  colder. The only days with temperatures as low as normal, or slightly below, were the 1st, 5th, 6th, 10th, and 31st. An extremely mild period occurred about the 12th to the 25th.

Precipitation averaged decidedly more than normal, except somewhat less than normal in several upper northwestern counties. It was heaviest in an eastern belt extending from St. Charles and Warren counties southward to Mississippi, Scott, Stoddard, Butler, and Ripley counties, and extremely heavy in the St. Louis area and in the vicinities of Doniphan, Poplar Bluff, Advance, Sikeston, Cairo, Ill., and Arcadia. It was the wettest March of record at St. Louis, with 9.52 inches, and Cairo, Ill., with 12.40 inches.

Numerous small tornadoes occurred, principally on the 15th and the 30th. (See special article, page 16).

Vegetation generally was about four weeks ahead of normal at the end of March. Peaches, plums, and cherries were shedding blooms in the southwestern counties. Field work was well advanced in most sections, but the month ended with wet ground, which stopped plowing and preparations for corn planting. Wheat was in good to excellent condition, except some bare spots in the fields of the northwestern and west-central portions. Spring oats were about all sown and some were up to good stands.

The principal rivers were at lower stages than normal for March, except during the last decade, when they rose to normal and above. Light floods occurred about the middle of the month, and again about the last day, in the smaller rivers of the southern portion of the State.

### TEMPERATURE

The monthly mean temperature for the State, 82 stations reporting, was  $53.6^{\circ}$ , or  $9.6^{\circ}$  above normal. The highest monthly mean was  $58.7^{\circ}$  at Campbell, and the lowest monthly mean was  $46.6^{\circ}$  at Tarkio. The highest temperature recorded was  $90^{\circ}$  at Louisiana on the 21st, and the lowest was  $14^{\circ}$  at Goodland on the 1st. The greatest daily range was  $50^{\circ}$  at Goodland on the 12th and at Garber on the 18th.

### PRECIPITATION

The average precipitation for the State, 141 stations reporting, was 4.98 inches, or 1.72 inches more than normal. The greatest local monthly amount was 10.72 inches at Morehouse, and the least local monthly amount was 1.20 inches at Grant City. The greatest amount in any twenty-four hours was 4.68 inches at Advance on the 13-14th. The average number of days with 0.01 inch or more of precipitation was 12.

The snowfall averaged only a trace, or 3.1 inches less than normal. The greatest monthly amount was 0.2 inch at Edgerton and Kidder.

### MISCELLANEOUS PHENOMENA

Aurora.—21st.

Dust.—4th, 5th, 13th, 15th, 16th, 30th, 31st; not of much

consequence except on the 15th in the southwestern section.

Fog.—Dense, locally, 3d, 4th, 10th, 11th, 14th, 15th, 16th, 17th, 20th, 28th.

Frost.—Killing, 1st, 5th, 6th, 7th, 10th, 17th.

Glaze.—5th.

Halos.—Solar, 4th, 8th, 22d, 24th, 26th, 30th; lunar, 8th, 10th, 11th, 12th, 18th.

(Continued on page 16)

### PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind			Relative humidity			Percentage of sunshine	
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12 noon		6:30 p. m.
Columbia.....	29.90	30.42	7	29.42	4	9.8	28	sw.	29	78	57	56	59
Kansas City.....	29.86	30.37	6	29.35	4	12.3	35	sw.	29	77	55	53	61
St. Joseph.....	29.87	30.38	26	29.31	30	10.8	32	w.	30	75	62	53	63
St. Louis.....	29.92	30.44	7	29.37	30	14.2	41	s.	30	79	60	50	52
Springfield.....	29.89	30.44	7	29.42	13	12.2	31	sw.	29	77	56	53	58
Cairo, Ill.....	29.95	30.50	7	29.45	13	11.3	34	sw.	31	76	62	53	50
Keokuk, Iowa..	29.90	30.40	8	29.39	30	9.3	26	sw.	29	78	56	56	58

### COMPARATIVE DATA FOR MARCH

Year	Temperature			Precipitation						Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy	
1888.....	38.5	90	1	3.90	4.13	4.37	3.19	...	10	..	..	..	..
1889.....	44.3	84	13	2.22	1.26	3.37	2.02	...	5	..	..	..	..
1890.....	37.3	79	—11	3.51	2.00	2.40	6.12	5.7	8	..	..	..	..
1891.....	36.6	78	—11	2.66	3.03	2.26	2.68	7.1	10	..	..	..	..
1892.....	38.9	87	5	2.98	3.31	3.46	2.18	...	8	..	10	13	..
1893.....	40.5	86	0	2.92	2.49	2.71	3.57	3.2	7	11	10	10	..
1894.....	47.7	89	2	3.22	2.29	2.95	4.43	0.2	6	15	9	7	..
1895.....	42.4	98	0	2.36	1.49	2.39	3.21	4.4	9	14	7	10	..
1896.....	39.2	82	2	2.22	1.15	2.04	3.47	5.2	8	11	9	11	..
1897.....	44.2	82	—5	6.73	4.38	5.62	10.18	1.0	12	9	9	13	..
1898.....	44.7	83	—9	7.44	5.26	6.42	10.63	0.6	11	11	7	13	..
1899.....	37.4	78	—8	2.92	3.19	2.34	3.23	8.9	10	9	11	11	..
1900.....	40.4	88	—4	1.52	1.43	1.35	1.79	0.2	6	15	9	7	..
1901.....	42.7	85	—1	3.77	3.33	4.21	3.77	1.8	8	11	8	12	..
1902.....	45.3	85	1	3.71	2.50	4.64	3.99	0.8	9	10	10	11	..
1903.....	46.8	81	9	3.62	2.34	4.17	4.34	1.1	8	13	7	11	..
1904.....	44.8	87	8	4.55	3.54	3.13	6.98	1.2	9	11	9	11	..
1905.....	50.3	88	10	3.15	2.27	3.36	3.83	T.	8	11	8	12	..
1906.....	34.6	75	—5	3.98	2.63	3.12	6.18	8.6	11	6	7	18	..
1907.....	53.9	95	16	2.76	2.54	3.05	2.70	1.0	7	14	7	10	..
1908.....	50.1	89	14	2.98	1.38	3.33	4.22	1.0	7	14	7	10	..
1909.....	44.5	81	9	3.03	2.24	2.01	4.83	0.6	6	13	9	9	..
1910.....	55.8	96	15	0.77	0.26	1.00	1.05	0.1	2	20	7	4	..
1911.....	46.8	91	5	1.72	1.71	1.84	1.62	1.4	6	16	8	7	..
1912.....	35.2	89	—4	4.69	3.69	5.25	5.12	16.5	11	12	6	13	..
1913.....	40.6	84	—12	4.61	3.44	4.52	5.95	5.0	9	12	8	11	..
1914.....	43.2	87	—2	2.76	2.80	2.89	2.59	4.7	8	13	7	11	..
1915.....	36.4	70	6	1.45	1.20	2.01	1.15	7.9	6	7	8	16	..
1916.....	47.0	95	—2	2.55	2.48	3.20	1.98	3.1	7	14	8	9	..
1917.....	45.2	86	—7	2.69	2.70	2.80	2.57	1.5	7	15	7	9	..
1918.....	50.9	95	8	1.02	0.46	1.55	1.06	0.1	4	18	6	7	..
1919.....	46.3	90	—2	2.40	2.27	1.44	3.49	0.7	6	15	8	8	..
1920.....	44.6	86	—6	5.12	4.60	5.37	5.40	1.4	8	15	6	10	..
1921.....	51.9	90	11	5.06	3.52	5.32	6.34	0.5	10	13	9	9	..
1922.....	45.6	80	3	6.39	4.89	6.78	7.51	2.2	12	11	6	14	..
1923.....	40.4	83	—11	4.23	3.53	3.64	5.52	2.3	8	14	6	11	..
1924.....	38.4	80	8	2.54	2.52	2.40	2.71	9.4	8	8	8	15	..
1925.....	47.7	86	—5	1.94	1.77	1.98	2.07	0.8	5	17	8	6	..
1926.....	39.6	83	8	2.87	2.15	2.82	3.63	7.0	8	13	6	12	..
1927.....	45.9	80	0	5.93	4.08	6.88	6.83	3.7	11	12	8	11	..
1928.....	46.3	89	10	1.61	1.00	1.58	2.24	2.4	5	15	9	7	..
1929.....	48.6	97	11	3.33	2.99	3.13	3.88	T.	8	12	8	11	..
1930.....	43.2	80	6	1.38	1.19	0.91	2.04	1.4	4	18	6	7	..
1931.....	39.5	70	10	3.18	2.57	3.05	3.91	8.8	8	11	7	13	..
1932.....	38.3	81	—2	1.99	1.39	1.62	2.96	2.8	7	12	9	10	..
1933.....	41.1	87	—5	3.61	3.05	2.79	4.99	2.0	10	11	8	12	..
1934.....	41.2	82	—3	2.55	1.53	2.10	4.03	4.9	7	13	8	10	..
1935.....	50.4	87	8	5.76	2.46	5.10	9.73	0.7	9	10	10	11	..
1936.....	49.4	84	13	1.27	0.82	1.00	1.98	T.	5	16	9	6	..
1937.....	40.4	77	6	1.66	1.27	2.15	1.56	2.8	6	12	8	11	..
1938.....	53.6	90	14	4.98	3.73	4.42	6.79	T.	12	13	7	11	..
Period.....	44.0	98	—12	3.26	2.51	3.18	4.08	3.1	8	13	8	10	..

Natural History Survey  
Library



## Climatological Data for March 1938

Stations	Counties	Elevation, feet	Temperature, in degrees Fahr.								Precipitation, in inches					Number of days			Prevailing direction of wind	Observers	
			Length of record, years	Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Length of record, years	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelting	With precip., .01 inch or more	Clear	Partly cloudy			Cloudy
Northern Division																					
Bethany	Harrison	916	43	49.6	+ 9.3	84	21	16	6	39	45	2.25	+0.02	0.82	0	7	19	7	5	sw.	A. S. Cumming
Brunswick	Chariton	652	57	50.4	+ 8.5	87	21	21	6	47	59	5.45	+2.75	1.75	0	11	16	3	12	sw.	O. K. Beuecke
Canton, Lock & Dam 20	Lewis	488	0	49.4	.....	84	21	22	6	35	8	3.86	.....	1.43	0	11	14	2	15	s.	Lockmaster
Chillicothe	Livingston	779	29	49.8	+ 8.1	84	21	19	6	48	32	3.66	+1.18	1.67	0	12	15	7	9	nw.	Wm. J. Olenhouse
Clifton Hill	Randolph	731	39	51.2	+ 9.0	84	21	20	6	41	29	6.26	+3.52	2.17	T.	8	14	5	12	sw.	Dr. A. J. Bradsher
Columbia	Boone	740	48	52.8	+10.2	86	21	24	6	42	48	5.59	+2.65	3.20	T.	11	9	8	14	s.	U. S. Weather Bureau
Conception	Nodaway	980	49	50.2	+10.4	84	21	15	6	38	54	1.55	-0.10	0.67	0	7	11	13	7	sw.	Fr. Adelmund Hess
Edgerton	Platte	856	18	51.4	+ 8.2	81	21	21	6	43	27	2.25	-0.01	0.92	0.2	13	17	6	8	w.	Fred L. Stiff
Elsberry	Lincoln	449	7	52.2 <sup>a</sup>	.....	84	21	23	1	39	7	5.20	.....	1.30	0	11	10 <sup>a</sup>	12 <sup>a</sup>	8 <sup>a</sup>	nw.	Ray E. Mills
Fayette	Howard	680	58	53.8	+11.9	85	21	22	6	45	55	3.82	+1.00	1.11	0	10	15	5	11	sw.	Morrison Observatory
Fulton	Callaway	818	50	53.0	+ 8.9	87	21	25	6	44	46	5.64	+2.68	1.44	0	10	13	9	9	sw.	Clyde C. Herring
Gorin	Scotland	700	...	.....	.....	...	...	...	...	...	51	3.50	+1.28	1.71	T.	10	16	6	9	sw.	W. L. Harker
Grant City	Worth	1,134	34	49.1	+ 7.8	85	21	15	6	40	46	1.20	-0.81	0.50	0	6	10	9	12	sw.	Howard Rybolt
Hannibal	Marion	759	46	51.6	+10.6	85	21	21	6	38	54	2.97	+0.37	1.64	0	14	10	5	16	se.	Hannibal Water Dept.
Kansas City	Jackson	741	49	52.2	+ 9.5	81	21	25	6	40	49	3.06	+0.53	1.33	0.1	11	7	12	12	sw.	U. S. Weather Bureau
Kansas City University	Jackson	908	0	51.4	.....	82	4	23	6	45	0	3.13	.....	1.61	0.1	12	14	6	11	sw.	University of Kansas City
Kidder	Caldwell	1,020	46	50.6	+ 9.8	82	21	19	6	44	50	3.04	+0.85	1.08	0.2	11	11	9	9	sw.	Roscoe L. Terry
King City	Gentry	1,095	...	.....	.....	...	...	...	...	...	12	1.41	-0.65	0.78	0	6	12	12	7	sw.	John M. Martin
Kirksville	Adair	969	49	50.2	+10.5	83	21	17	6	37	56	3.32	+0.38	1.50	0	10	16	9	6	s.	Charles Noble
Lawson	Ray	1,050	0	51.8	.....	80	4 <sup>†</sup>	19	6	46	0	3.36	.....	1.71	0.1	11	11	11	9	sw.	Elmer E. Lamb
Linneus	Linn	816	...	.....	.....	...	...	...	...	...	6	3.21	.....	1.42	T.	11	16	4	11	sw.	H. D. Taggart
Louisiana	Pike	469	44	51.0	+ 7.5	90	21	23	6	40	57	3.64	+0.17	1.19	0	15	10	13	8	w.	Stark Bros' Nurseries
Macon	Macon	875	39	49.2	+ 7.0	85	21	18	6	47	45	3.74	+0.90	2.00	0	10	15	6	10	w.	Mrs. W. C. Brown
Maryville	Nodaway	1,169	48	48.8	+10.9	85	21	16	6	38	44	1.97	+0.10	0.70	0	10	15	2	14	nw.	R. B. Montgomery
Mexico	Audrain	800	49	50.2	+ 8.2	87	21	21	6	45	60	4.14	+1.23	1.47	0	16	...	...	...	w.	Mrs. Abbie Snoddy
Moberly	Randolph	875	1	52.5	.....	85	21	18	6	49	1	4.39	.....	0.96	0	9	21	2	...	sw.	McCormick Hospital
Oregon	Holt	1,048	82	50.8	+11.2	84	21	19	6	36	82	2.16	+0.20	0.70	T.	7	14	10	7	sw.	Miss Mina Wright
St. Charles	St. Charles	520	50	53.0	+ 8.5	86	21	26	6	36	60	6.86	+3.69	1.60	0	15	16	6	9	se.	Martin L. Comann
St. Joseph	Buchanan	957	28	50.6	+10.1	83	21	21	6	40	66	1.69	-0.79	0.72	T.	10	9	12	10	nw.	U. S. Weather Bureau
Steffenville	Lewis	650	40	49.9	+ 7.7	84	21	20	6	35	45	4.22	+1.21	1.30	T.	13	12	11	8	s.	Frank Hall
Tarkio	Atchison	916	35	46.6	+ 6.5	88	21	17	6	48	44	1.96	+0.29	0.89	T.	5	11	8	12	sw.	Albert Volker
Trenton	Grundy	822	42	50.8	+ 9.7	85	21	19	6	38	43	2.30	-0.15	1.09	0	13	14	10	7	s.	W. H. Estes
Unionville	Putnam	1,062	45	47.8	+ 8.9	87	21	17	6 <sup>†</sup>	48	45	2.63	+0.13	1.45	0	8	12	6	13	se.	John H. Schick
Warrenton	Warren	816	56	54.0	+11.5	83	21	23	6	38	48	6.74	+3.56	0.97	0	16	8	10	13	sw.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.	574	66	48.3	+ 9.4	83	21	23	6	33	66	4.58	+2.20	1.75	T.	14	10	6	15	sw.	U. S. Weather Bureau
Division means and extremes		.....	...	50.8	+ 9.3	90	21	15	6	49	...	3.73	+1.22	3.20	T.	11	13	8	10	sw.	...
Southwestern Division																					
Appleton City	St. Clair	813	43	53.9	+ 8.8	83	25	21	6	40	46	4.20	+1.05	1.40	T.	7	20	0	11	sw.	Rolla Brown
Bolivar	Polk	1,071	35	56.0	+ 9.7	81	21 <sup>†</sup>	24	6	45	43	4.07	+0.64	1.45	T.	13	10	11	10	sw.	Southwest Baptist College
Boonville	Cooper	650	0	54.5	.....	85	21	23	6	44	61	3.06	+0.02	0.87	0	12	16	4	11	sw.	Boonville Water Dept.
Clinton	Henry	765	45	54.4	+ 9.4	82	25	18	1	43	51	4.07	+0.71	1.80	T.	9	...	...	...	...	U. S. Weather Bureau
Dean	McDonald	1,000	34	56.4	+ 7.6	83	25	21	6	45	39	5.19	+1.49	1.65	0	10	9	10	12	sw.	E. S. Taylor
Eldon	Miller	934	43	51.6	+ 8.0	85	21	24	6 <sup>†</sup>	47	39	5.57	+2.53	1.52	0	12	11	16	4	s.	John H. Shepherd
Garber	Taney	950	4	56.7	.....	85	21 <sup>†</sup>	21	1	50	4	5.16	.....	1.44	0	14	2	12	17	sw.	William H. Durham
Harrisonville	Cass	904	60	48.7	+ 7.4	79	21	20	6	45	63	4.79	+1.99	2.48	0	11	16	3	12	sw.	John H. Patterson
Jefferson City	Cole	557	48	50.8	+ 7.2	87	21	22	6	42	56	5.26	+2.20	1.30	0	14	11	8	12	s.	Mrs. Frank Kliegel
Lakeside	Miller	595	7	52.5	.....	84	21	22	1	43	7	4.45	.....	1.23	...	16	...	...	...	sw.	W. S. Frame
Lamar	Barton	980	50	53.2	+ 7.2	84	25	23	6 <sup>†</sup>	45	57	4.47	+1.28	1.57	0	8	14	6	11	sw.	Jesse A. Mann
Lebanon	Laclede	1,265	50	54.9 <sup>a</sup>	+ 9.9	84	21	22	6	41	51	3.96	+0.48	0.90	0	13	11	9	11	sw.	Mrs. Rosa E. Montelius
Lexington	Lafayette	688	53	51.4	+ 8.0	81	21	22	6	45	54	4.16	+1.38	2.12	T.	11	18	9	4	w.	Miss Carrie Loomis
Lockwood	Dade	1,078	32	55.9	+ 8.6	79	21	24	6	41	42	4.56	+1.00	0.95	0	9	18	7	6	sw.	Hubert A. Nieman
Marshall	Saline	779	51	54.6	+11.6	82	21	23	6 <sup>†</sup>	49	48	4.34	+1.42	1.20	0	7	20	6	5	sw.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	37	54.5	+ 9.1	83	21	22	6	40	41	3.77	-0.10	1.48	0	10	15	8	8	se.	Mo. Fruit Exp. Station
Mount Vernon	Lawrence	1,174	26	56.4	+10.5	81	25	19	6	37	38	3.90	+0.01	0.85	0	9	14	9	8	s.	G. H. Boswell
Neosho	Newton	1,011	51	57.2	+ 9.1	83	25	24	6	45	55	4.80	+1.25	1.26	0	13	17	4	10	sw.	U. S. Fisheries Station
Nevada	Vernon	862	45	56.7	+11.8	85	25	22	6	43	46	5.07	+2.20	1.30	0	8	12	7	12	sw.	T. J. Kaupp
Sedalia	Pettis	910	25	55.1	+12.3	87	25	23	6	48	27	3.95	+1.12	1.04	0	9	20	1	10	s.	Mrs. Laura S. Trader
Seligman	Barry	1,542	37	57.4 <sup>a</sup>	+10.8	80	14	23	6	40	35	4.82	+1.22	1.13	0	10	13	8	9 <sup>a</sup>	w.	Floyd E. Fawver
Seymour (near)	Webster	1,642	32	54.4	+ 9.0	80	21	23	6	43	32	4.01	+0.35	1.18	0	11	13	8	10	s.	A. L. Hailey
Springfield	Greene	1,301	50	54.4	+ 9.2	81	21	26	6	34	50	2.76	-0.63	0.97	0	13	13	7	11	s.	U. S. Weather Bureau
Versailles	Morgan	1,037	11	55.3	+10.3	84	21	22	6	46	14	4.81	+2.45	1.74	0	10	11	8	12	sw.	I. M. Wilson
Warrensburg	Johnson	878	51	54.6	+10.6	81	25	22	6	48	58	3.96	+0.87	1.40	T.	9	14	5	12	sw.	E. A. Markey
Warsaw	Benton	687	37	55.6	+ 8.6	84	25	22	1	41	43	4.11	+0.56	1.12	0	9	17	4	10	s.	Everett Martin
Division means and extremes		.....	...	54.5	+ 9.3	87	21 <sup>†</sup>	18	1	50	...	4.42	+1.24	2.48	T.	11	14	7	10	sw.	...
Southeastern Division																					
Advance	Stoddard	355	1																		



Daily Precipitation for March 1938

Stations	Drainage-basins	Day of month																															Total		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
Northern Division																																			
Amity III	Grand		T.	T.		.01				.38	.50			.69	.13	.21	.03			.08					.03						.70	T.	.03	2.79	
Bethany	do									.50	.13					.35	.10		T.											.58	.24	.35		2.25	
Bowling Green III	Mississippi		.02	.11	.01	.08					.05			.13	.59	.35	.10			.08				T.							.84	.14		3.93	
Brunswick I	Grand			.02	T.	.03	.03			.20	.04			1.38	.59	.35				T.					.60						.175		.46	5.45	
Canton, Lock No. 20 III	Mississippi		T.	T.	.21	T.	.02			.03	.06		.05		T.	.26	.09	T.						.08							.143		.90	3.86	
Chillicothe III	Grand			T.	.01	.03	.02			.26	.11			.39	.18	.30	.03			T.				.11	.22			.73			.167		.35	3.66	
Clifton Hill	Chariton					.13				.14				.90		.90	.05														1.27	.70	.217	6.26	
Columbia***	Missouri	T.	.07		.09	.04				.12	T.			3.11	.10	.15	T.			T.				.01	T.						1.39	.02	.49	5.59	
Conception	do	T.	T.							.59	.06					.04	.05														.67	.04	.10	1.55	
Edgerton	Missouri	T.	.02			.05				.42	.01			.35	T.	.28	.02			.03			.05	.04							.92	.01	.05	2.25	
Edina	Mississippi		T.		.09	T.				T.	.14				.14	.35	.16														.153		.28	2.81	
Elsberry	do			.78	.04	.38				.07				T.	.85	.18	T.														.07	.60	1.30	5.20	
Farber	do		.06	.13	.03	.20				.02				1.35	1.22	.06	.08							.45	.48							.145	.13	.07	6.15
Fayette	Missouri		.03	.05		T.				.07				.61	.26	.53	.03				T.										1.11	.90	.23	3.82	
Flinton	do		T.	.35	T.		.15			.10	.10			.98	1.16	T.	T.															.144	.17	.44	5.64
Gallatin II	Grand				T.	T.				.52				.48	T.	.37	.08								.75							.132		.13	3.10
Gorin	Mississippi	T.	T.		.19	T.				.12			.05	.05		.56	T.							T.	.20			.54				.171	.16		3.50
Grant City	Grand	T.	T.							.47	T.			.18	.10	.02	.12	.02		T.	T.				.12							.50	.10	.02	1.20
Hannibal	Mississippi		T.	.02	.11	T.				.06	T.				.10	.02	.12	.02														.45	.19	.13	2.97
Hermann II	Missouri		.02	.70		.36	.03			.17	.07			.73	1.08	.03	.35			.08				1.02								.98	.46	1.52	7.60
Kahoka	Mississippi		T.	T.	T.	.03	.20			.09	.27	.03		T.	T.	.41	.12				T.	T.		.07	T.						1.32	.01	.39	3.06	
Kansas City***	Missouri	T.	T.	T.	T.	.03				.29	.04	.08			.26	.16	.28							T.	.03							1.56	.05	.22	3.13
Kansas City University	do	T.	.01	T.	.05					.25	.28			.48	.08	.42	.02			.05					.12							1.08		.22	3.04
Kidder III	Grand				T.	T.				.25	.28			.48	.08	.42	.02			.05											.78		.02	1.41	
King City	Missouri			T.						.28				T.		.12	.12															1.50		.08	3.32
Kirksville	Mississippi					.07				.11				.02	.27	.73	.02			.05				.43		.09						1.78		.49	3.40
La Belle	do				.11	.13				.07	.08			.04																		1.45	.26	.24	3.36
Lawson	Missouri	T.	.03			.03				.31	.01			.49	.09	.34								.17		.26						1.80		.41	2.14
Linneus III	Grand		.01	T.		T.	.06			.16	.10			.12	.75	.10	.08							.37								1.42		.07	3.21
Louisiana	Mississippi			.15	.07	.10				.03	.12			.12	.75	.10	.08							.20								.83	.36	.03	3.64
Lucerne III	Grand			.06	.01					.06	.23			.04	.22	.72								.05								.88		.41	2.14
Macon	Chariton		.02	.02		T.				.08	.06			.04	.22	.72	T.							.08								2.00		.50	3.74
Madison	Mississippi		.04	.03	.05					.03	.04			.20	.25	.33	.02	.06						.20								1.49		.46	3.20
Maryville	Missouri	T.	.05		.01	.20	T.			.69	.01				.10	.08			.01													.45	.04	.53	1.97
Memphis	Mississippi					.20	T.			.02	.16				.59	.02																1.80		.16	3.99
Mexico II	do		.01	.15	.01	.25	.05			.03	.05			.75	.82	.05	.04	.02														1.47	.04	.14	4.14
Milan II	Grand				.03					.10	.17			.08	.60	.31								.09	.20							1.55		.12	3.25
Moberly	Mississippi			.01	.06					.15				.76	.24	.36	.09							.13				.75				.95		.96	4.39
Monroe City	do			.01	.06					.70	.05			.23	.19		.11		T.					.77								1.87	.21		3.60
Oregon	Missouri	T.			T.					.05				.35		.18	.05		T.													.55	.05	.28	2.16
Palmyra	Mississippi		T.	.04	.31	.02	T.			.12	.08		.05	T.	.04	.28	.14							.90		.03						1.80		.67	4.48
Paris	do		.08	.03	.03					.04	.02		.02	.41	.08	.12	.04															1.63		.13	3.69
Perry	do		.04							T.				.25	.30	.05																1.63		.23	3.00
Philadelphia III	do		T.	.05	.04					.05	.03			T.	.32									.72								2.03		.204	5.28
St. Charles	Missouri		.08	.60		.26				.12	.10			.68	.70	.28	.08			.11				.30								.66	1.19	1.60	6.86
St. Joseph***	do	T.	T.	T.	.01	T.				.02	.52			.27	.02	.05			.01				.07	T.								.71	.01		1.69
Saverton, Lock No. 22 III	Mississippi		T.	.01	.07	T.				.04	.01	.15	.03	.06		.16	.26	T.						.99								1.35	.02	.08	3.23
Shelbina I	do		.05	.01	.05	.03				.11	.03		.06	.01	.23	.22	.03							.10								1.66		.142	4.05
Shelbyville	do			.08						.11			.08			.32								.06								1.75		1.70	4.10
Steffenville	do		T.	.04	.10	.04				.20	T.	.07		.05	T.		.45	.07														.74	1.30	1.00	4.22
Tarkio	Missouri		.02		T.	T.				.29				.05	.01	.26	.01		.02					.11		.05						.17		.89	1.96
Trenton	Grand	T.		.02	.04					.29				.05	.01	.26	.01							.02		.11						.68	.41	.38	2.30
Troy	Mississippi		T.	.94		.26				.12	T.			.90	.29	.12	.26															.82	.26	1.25	5.74
Unionville III	Chariton																																		



Daily Precipitation for March 1938—Continued from preceding page

Stations	Drainage-basins	Day of month																															Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Southeastern Div.—Concluded																																	
Birch Tree (near).....	Black.....	.08	T.			.38				.39	.13			.02		.75				.29	.18			.41			.48		.57	1.28	.28	.61	5.85
Bragg City [Ill.].....	St. Francis.....		T.				.25			T.	.97				T.	T.				.60	T.			.22			.63	T.	.205				4.72
Campbell.....	do.....	.05	.01		.08					.64	.22					.08				.22	.02		.25	T.		.30	.17	.09	1.57	.12	.12	5.94	
Cape Girardeau [Ill.].....	Mississippi.....	.05	.04			.03				.03	.47			.14	.98	.21				.11	.05			.13		.08		.125	.88	.95		5.40	
Caruthersville [Ill.].....	do.....	.05	.03			.09				.13	.95				.07	.27				.32	.22	.02		.19		.50		.205	.02	.05		4.96	
Centerville [Ill.].....	Black.....		.04		.39					.09	.21			.12	.17	.88	.42						.25		.32		.82		1.03	.30	.89	5.74	
Crystal City [Ill.].....	Mississippi.....		.26		.32					.52				.66	1.00	.81				.11		.42				.26		.05	1.08	1.14		6.63	
Cuba [Ill.].....	Meramec.....				.80					.45				.46	.37	.12				.11			.30					.123	.82	.30		4.96	
Dexter [Ill.].....	St. Francis.....		.03	T.						.02	1.04	.02			.04					T.	.04			.13		.52		.170	3.30	2.75		9.59	
Douglas [Ill.].....	Black.....	.12			.02					.51	.24				.21				.28	.20					.55	.28	.23	2.25	1.88	1.35		8.12	
Farmington.....	St. Francis.....		T.		.46					.04	.28			.89	.05	.96				.05			.16		.02			.11	1.72	.15	.57	5.46	
Fisk [Ill.].....	do.....	.11	.06		T.	.03				.06	.41				.41				.14	.07			.52	.7	.39	.7	.233	1.78	3.21		9.52		
Fredericktown [Ill.].....	do.....				.32					.04	.38				.37	.49	.55						.06		.04			.2	.16	.09	1.01	5.51	
Goodland.....	Black.....				.46					.07				.85		.80				.10					.20			.10	1.35	.34	.82	5.09	
Greenville.....	St. Francis.....					.68	.50			.14	.64	1.13			.15				.15				.06		.31		.19	2.38	.26	.23	7.67		
Jackson.....	Mississippi.....	.03			.09					.28	.40				.10	1.28	.49			.11			.13	.05	.15		.09	1.67	.51	.77	6.15		
Jerome [Ill.].....	Gasconade.....		.08		.65					.7	.26				.70	.78	.22			.7			.07					.124	.34	.23	4.57		
Koshkonong.....	Black.....			.19						.68	.15				.50		.40			.18	.18		.19		.67	.31	.46	1.51	.07	.33	5.82		
Leeper [Ill.].....	do.....				.06					.25	.63				.17	.87	.22			.05	.22		.15		.26		.2	.66	.10	.78	6.42		
Licking (near).....	Gasconade.....			.50						.5	.50				.19	.24	.38			.05	.22		.60		.30		.232	.30	.75		6.08		
Marble Hill.....	Mississippi.....			.05		1.10				.30	.35				.05	1.15				.11		.05	.15	.10		.10		.15	1.05	.15	.20	5.25	
Meramec Park [Ill.].....	Meramec.....			.90						.40	.32				.48	.99	.45	.22		.11			.16		.10			.105	1.02	.37	6.21		
Morehouse.....	Mississippi.....		.08		.05					.43	.34		.7		1.00	.11			.17			.7	.11		.30	.06	.08	1.77	4.67	1.55	10.72		
New Madrid [Ill.].....	do.....	.03	.08		.17					.09	.71			.7		.05	.60			.7	.32	.01		.23	.06	.39	.7	1.80	.7	.88	5.42		
Owensville [Ill.].....	Gasconade.....			.08		.51				.23				.54	.73	.43	.75			.7								.110	.88	.75	5.25		
Pacific [Ill.].....	Meramec.....	.03	.24		.68					.05	.15			.75	1.04	.24	.7	.18		.7			.35		.47			.85	1.38	1.88	7.82		
Parma [Ill.].....	St. Francis.....									.64										.25	.10		.35				.150	.20	1.60		5.11		
Poplar Bluff [Ill.].....	Black.....				.06					.25	.57				.46					.14	.03		.7		.61			1.83	1.56	2.95	8.46		
Richwoods [Ill.].....	Meramec.....			.75						.45					.39	.95	1.31			.14		.30		.21				.110	.50	.60	6.70		
Rolla.....	do.....	T.	.70	.10		.80				.16	.15				.89	.06	.05	.7		.05		.03	.27		.03			.23	1.12	1.02	.40	5.36	
St. Louis.....	Mississippi.....	T.	.94	.01	T.	.50				.18	T.	T.		.209	.15	1.41	T.			.13			.56	.13	.05		.45	.43	2.74		9.52		
St. Louis Airport.....	Missouri.....	.40	.27	T.	.55					.11	.02		.7	.116	.17	.76	T.			.09		.7	.26	.05		.26		.39	2.1	.7	6.59		
St. Louis University*.....	Mississippi.....	.40	.27	T.	.55					.19				.247		1.38				.12			.80		.06			.58	.02	2.70		9.54	
Salem.....	Meramec.....		.7	.7	.30					.22	.35			.76		.60				.08	.07		.43		.20			.20	1.01	.82	.46	5.50	
Sikeston [Ill.].....	Mississippi.....	.05	.15							.10	.70				1.00					.11			.06		.37		.155		.425	1.20	9.54		
Union.....	Meramec.....	.7	.22	.48		.7				.07	.26			.128	.19	.32				.12			.74		.24		.19	.71	1.10	1.25	7.17		
Valley Park [Ill.].....	do.....	.04	.26	.7	.30	.7				.04	.29			.25	1.10	.42	.52			.04	.03		.42		.7			.75	.90	2.35	7.71		
Van Buren.....	Black.....				.7					.64				.15		.25				.15	.42		.57		.78	.34	.7	.34	1.46	.19	.26	6.56	
West Plains.....	do.....	.09	T.		.38					.44	.08			.04		.97									.65		.65		.258	.25	.23	5.96	
Williamsburg [Ill.].....	do.....	.13		.13		.05				.20	.53		.01		.05	.63	.27				.25		.47		.40	.34	.02	2.01		.45	5.50		
Willow Sprgs. (near) [Ill.].....	White.....	.06			.85					.23	.29			.01	.03	.23				.23	.38		.47					.200	.45	.28	8.15		
Zalma.....	Mississippi.....	.09								.35	.39				3.07	1.12			.10			.7	.30		.7			.200	.45	.28	8.15		
Cairo, Ill. <sup>1890</sup> .....	do.....	.21			.08					.69				.486	.54	.02		.7		.11	.7		.29	.03	.7	.15		.23	1.34	3.26	.59	12.40	

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. <sup>†</sup> Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. <sup>‡</sup> Trace, or less than 0.01 inch.  
 \*\*\* Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. \*\* Precipitation in the next following measurement; separate dates of fall not recorded. \* Precipitation is for 24-hour period, midnight to midnight. † Estimated. ‡ Partially estimated. ||||| Incomplete.

## Continued from page 13

Hail.—Light or moderate, doing no material damage, at various places, principally in the southern half of State, on 5th, 10th, 13th, 15th, 22d, 23d, 25th, 29th, 30th. Heavy, 13th, at Advance and vicinity, damage estimated, \$15,000; also at Annapolis, Benton, Coldwater, House Mills, and in Perry County, near Altenburg, Highland, Longtown, and Frohna, with some damage to automobiles and orchards; 15th, near Lutesville, Crystal City, Festus, Herculaneum, De Soto, and Hermitate, with considerable damage to roofs and windows; 30th, at Stockton, Humansville, Eldon, Preston, Palmyra, St. Louis and vicinity, with damage, estimated, about \$3,000 near Humansville, \$8,000 near Palmyra, and considerable, unestimated, near Preston.

## Sleet.—5th.

Thunderstorms.—Local, 2d, 3d, 4th, 9th, 10th, 12th, 14th, 16th, 18th, 19th, 23d, 25th, 26th, 28th, 30th; more or less general, 5th, 13th, 15th, 22d, 29th, 30th.

Windstorms.—No destructive storms reported, except tornadoes (see special article).

## TORNADOES

Thirteen tornadoes were reported in Missouri during March 1938, as follows:

March 5.—During the early morning a storm, reported as a small tornado, moved across northern Douglas County, northward into the southern tip of Wright County, causing damage of about \$10,000.

March 15.—(1) A tornado originated, apparently, on the Kansas-Missouri border about 11:50 p. m. March 14. It moved through Asbury at 12:30 a. m., March 15; width of path, about 100 feet; damage about \$20,000. In the Iantia and Liberal communities, Barton County, power lines were damaged. Persons reported injured, 1. (2) A tornado apparently originated in Dent County, north of Salem, shortly before noon. It moved northeastward through Crawford County, striking Berryman shortly after 12 noon. It then swept through central sections of Washington and Jefferson counties at about 1:30 p. m., crossing the Mississippi River between 2:10 and 2:30 p. m. Greatest damage apparently done in a strip about 10 miles long and one-half mile wide, south of Hillsboro. Path of storm varied considerably; in Washington County it was one-half mile wide, in other places much narrower. Estimated damage in Washington County,

about \$10,000. Bankers in Potosi estimate property loss in entire storm at \$150,000. Persons reported killed, 1; injured, 18. (3) About 2:30 p. m., a tornado struck north and northeast of Poplar Bluff, narrowly missing Hendrickson, near the extreme northern border of Butler County. It then moved toward Ojibway, crossing into Wayne County. Estimated damage in Butler County, about \$15,000. Apparently the tornado then moved toward a point about one-half mile east of Millersville, Cape Girardeau County (about 3:40 p. m.). Damage here estimated at \$2,000. It crossed Highway 25, about 20 miles north-northwest of Cape Girardeau at about 4:00 p. m. The tornado struck Altenburg, Perry County, sometime after 4:00 p. m.; estimated damage here, \$5,000. Width of path varied from 100 to 300 feet. Persons reported injured, 8. (4) A tornado originated in extreme northeastern Arkansas, moved into Missouri below Senath at 3:25 p. m., progressed northeasterly through Nesbit, Caruth (3:44 p. m.), Liberty, Tywhappity, Hemphill, Bakersville, Bragg City, Wardell (4:00 p. m.), and Swift, thence apparently crossing the Mississippi into Kentucky. In the southeast corner of Dunklin County width of path was about one-fourth mile, while at Wardell it was 200 yards. Estimated damage at Caruth, \$50,000, and at Wardell, \$15,000. Persons reported killed, 10; scores injured.

March 29.—A freak windstorm, apparently a small tornado, hit Poplar Bluff shortly after midnight. It is believed the storm started below Harviell, about 8 miles southwest of Poplar Bluff, and moved northeastward. Damage estimated at several thousands of dollars.

March 30.—(1) A tornado crossed the extreme southeastern corner of Kansas into Missouri shortly after 11:00 a. m.; struck the southwest part of Lamar about 11:50 a. m., passed 5 miles north of Stockton, Cedar County, at 12:30 p. m., and went a little to the north of Humansville, although no reports of wind damage at that point are available. Width of path, 300 to 400 feet. Property damage in Lamar estimated at \$5,000. (2) A tornado was first noted about four miles southeast of Columbia at about 11:36 a. m., moving northeastward. It crossed Highway 40, six miles east of Columbia at 11:54 a. m., passed two miles northwest of Stephens at 12:01 p. m., into extreme northwestern Callaway County. This tornado was seen later in the afternoon (exact time unknown) west of Mexico, Audrain County, moving northeastward of the town; observed about 20 miles southwest of Palmyra at 2:00 p. m. Width of path about one-quarter mile. Estimated damage in Boone County, \$75,000; in Callaway County, \$45,000. Persons reported killed, 1; injured, 18. (3) A small tornado was noted near Shelbyville, Shelby County, between 1:30 and 2:00 p. m. Damage to property about \$3,200; to crops about \$1,500. Persons reported injured, 6. (4) A small tornado was observed between Dixie, 10 miles south of Fulton, and Williamsburg, 18 miles east-northeast of Fulton at 3:00 p. m. Width of path varied between 300 yards and one-quarter mile. Damage estimated at several thousands of dollars. Persons reported injured, 8. (5) A tornado that originated near St. Charles, St. Charles County, at 5:53 p. m., moved northeastward into Illinois at Alton at 6:15 p. m. Width of path at St. Charles, 500 yards; approximate damage, \$25,000. Persons reported injured, 2. (6) A tornado that came from the south struck Neelyville, Butler County, at 7:50 p. m., moved northeastward, crossed Highway 53, seven miles southeast of Poplar Bluff, and traveled in a northeasterly direction between Broseley and Highway 60. Width of path varied from 100 yards to one-quarter mile. Estimated damage in southern Butler County, about \$50,000. Persons reported killed, 4; injured, 20. (7) A tornado that started about 9:00 p. m. near Gideon, New Madrid County, moved northeastward toward New Madrid (9:30 p. m.). Damage at Gideon, about \$20,000; several thousands of dollars at New Madrid. Persons reported injured, 2.

See page 18 for evaporation data.



## Daily Temperatures for March 1938

Stations	Day of month																															Mean		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
Northern Division																																		
Bethany.....	Maximum...	59	59	47	64	45	41	58	62	49	54	64	75	62	56	65	56	67	76	65	77	84	74	60	70	74	55	62	53	70	77	51	62.3	
Bethany.....	Minimum...	25	38	30	32	26	16	19	24	35	30	29	43	48	35	43	36	30	50	40	40	56	50	37	38	53	36	30	42	50	48	32	36.8	
Brunswick §§.....	Maximum...	60	66	43	80	38	41	60	65	53	52	63	76	60	61	70	49	66	79	63	77	87	78	58	70	78	55	64	61	78	74	52	63.8	
Brunswick §§.....	Minimum...	27	26	36	33	35	21	22	25	28	34	30	32	47	40	39	42	36	35	48	42	41	60	42	38	42	38	38	39	45	51	35	37.1	
Canton, Lock No. 20.....	Maximum...	57	62	50	48	46	38	56	55	40	45	59	72	55	54	57	54	60	75	66	75	84	77	57	64	65	63	60	58	76	70	65	60.4	
Canton, Lock No. 20.....	Minimum...	29	41	28	32	33	22	25	35	31	31	38	43	37	43	38	39	40	33	39	42	42	53	62	39	37	43	37	33	42	43	51	34	36.6
Chillicothe §§.....	Maximum...	59	62	49	80	33	41	58	66	49	54	63	77	59	56	68	50	68	79	64	77	81	72	59	70	75	62	63	57	72	75	53	63.0	
Chillicothe §§.....	Minimum...	28	30	32	32	28	19	22	27	30	32	29	31	48	38	39	40	33	39	42	42	53	62	39	37	43	37	33	42	43	51	34	36.6	
Clifton Hill.....	Maximum...	51	57	56	75	73	35	53	56	46	56	66	69	67	56	67	59	65	78	68	74	84	76	55	67	67	67	56	70	70	66	62.9		
Clifton Hill.....	Minimum...	28	42	32	37	29	20	24	29	41	32	30	44	51	39	36	40	34	46	49	41	55	55	40	37	55	37	35	40	51	56	39	39.5	
Columbia.....	Maximum...	60	62	45	80	53	39	61	66	54	50	60	76	66	57	73	53	66	79	65	75	86	77	56	68	81	54	62	58	77	73	52	61.0	
Columbia.....	Minimum...	31	45	34	38	30	24	29	33	38	34	36	50	49	41	49	43	43	49	50	45	59	47	40	40	47	40	42	44	56	44	37	41.5	
Conception.....	Maximum...	57	57	47	69	50	38	56	63	59	52	62	75	73	67	62	58	68	73	62	78	84	79	57	69	74	56	63	58	60	75	53	63.0	
Conception.....	Minimum...	26	36	31	31	22	15	34	28	35	30	30	44	51	37	35	32	32	30	39	46	56	46	34	39	53	35	37	41	46	43	30	37.3	
Edgerton.....	Maximum...	56	66	51	79	58	43	63	65	57	52	63	76	60	56	63	53	66	75	64	75	81	76	60	70	77	59	61	54	70	76	56	63.9	
Edgerton.....	Minimum...	26	41	35	36	26	21	22	25	38	31	26	47	54	40	48	39	29	51	41	42	59	49	37	58	37	32	43	51	48	32	38.9		
Elsherry.....	Maximum...	60	67	60	61	66	41	60	62	54	46	58	77	63	58	65	64	62	78	75	84	83	69	64	76	74	61	56	77	73	72	65.5		
Elsherry.....	Minimum...	23	41	33	35	31	24	25	26	42	35	37	38	47	42	49	43	49	50	42	42	59	42	40	40	42	45	32	51	42	51	34	39.0	
Fayette.....	Maximum...	58	64	58	80	72	39	58	65	60	52	61	76	73	59	77	57	63	78	62	75	85	79	62	75	80	64	61	56	72	61	60	75	66.8
Fayette.....	Minimum...	28	44	33	35	30	22	25	32	44	34	33	45	53	39	48	40	32	47	53	41	53	56	47	36	54	38	38	42	52	55	34	40.7	
Fulton§§.....	Maximum...	58	63	45	79	39	40	62	68	51	42	51	61	77	64	58	74	46	65	80	67	77	87	78	56	68	83	53	62	61	78	74	54	63.8
Fulton§§.....	Minimum...	27	37	35	35	35	25	30	40	47	35	37	40	55	42	44	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	
Grant City.....	Maximum...	59	56	48	54	43	39	55	62	57	51	62	75	66	57	63	57	68	75	64	78	85	78	57	70	72	55	63	57	70	75	56	62.2	
Grant City.....	Minimum...	27	37	31	31	23	15	19	25	34	28	25	39	50	53	45	37	28	51	40	42	56	45	35	38	51	34	33	41	48	48	31	36.0	
Hannibal.....	Maximum...	57	61	58	51	61	39	57	60	54	45	58	73	67	57	58	59	64	79	70	75	85	78	58	65	71	64	61	57	77	72	65	63.1	
Hannibal.....	Minimum...	30	44	30	33	29	21	25	32	39	32	33	45	54	38	48	39	41	57	44	48	58	43	37	50	39	39	42	50	55	36	40.1		
Kansas City.....	Maximum...	55	64	46	80	39	43	64	68	52	53	63	78	65	54	63	56	69	76	62	77	81	71	59	72	77	56	62	58	72	77	52	63.4	
Kansas City.....	Minimum...	31	45	37	40	28	25	30	36	35	32	51	49	42	45	40	34	50	44	47	62	46	42	46	45	39	42	45	53	40	38	40.9		
Kansas City Univ.....	Maximum...	56	65	56	82	72	42	65	69	63	53	64	78	72	59	64	59	68	78	70	77	81	78	58	72	77	67	62	58	73	77	69	67.2	
Kansas City Univ.....	Minimum...	28	43	36	38	27	23	27	31	44	35	34	50	55	41	49	39	35	54	43	44	60	53	41	42	57	39	42	44	51	53	34	41.7	
Kirksville.....	Maximum...	58	61	53	62	51	37	55	63	59	46	61	73	70	56	65	63	64	76	73	74	83	62	68	56	68	74	55	61	53	71	72	52	62.7
Kirksville.....	Minimum...	29	42	33	33	27	19	23	30	37	32	30	45	54	36	46	38	33	49	40	42	56	49	37	36	53	36	33	42	50	48	33	38.4	
Lawson.....	Maximum...	56	63	52	80	67	41	61	66	55	54	62	76	66	56	67	57	66	77	63	76	80	73	59	69	77	56	62	52	71	75	54	64.1	
Lawson.....	Minimum...	30	42	35	34	26	19	27	31	37	32	32	48	56	38	47	38	33	51	40	43	57	50	38	59	39	35	35	42	50	52	32	39.5	
Louisiana.....	Maximum...	56	63	59	60	64	40	54	60	50	45	52	74	60	55	62	63	62	78	70	74	90	80	60	62	70	65	55	50	80	73	68	63.0	
Louisiana.....	Minimum...	25	43	33	35	30	23	24	26	42	33	35	40	45	40	45	39	40	52	40	50	60	60	60	60	60	60	60	60	60	60	60	60	
Macon§§.....	Maximum...	58	65	38	76	32	40	57	62	46	38	61	74	57	56	71	45	65	79	63	75	85	76	58	68	76	55	67	57	75	71	51	61.5	
Macon§§.....	Minimum...	27	34	29	29	30	18	22	27	31	51	62	74	63	57	61	55	66	70	61	77	85	79	57	69	72	55	62	57	70	75	48	61.2	
Maryville.....	Maximum...	56	56	45	58	45	37	54	64	57	51	62	74	63	57	61	55	66	70	61	77	85	79	57	69	72	55	62	57	70	75	48	61.2	
Maryville.....	Minimum...	23	36	31	32	23	16	22	29	34	29	27	39	51	37	46	36	28	52	37	41	57	45	32	37	52	35	37	42	47	46	30	36.4	
Mexico§§.....	Maximum...	65	66	39	77	39	40	60	65	52	50	62	78	65	57	63	57	68	72	55	67	81	68	77</										



Stations		Day of month																															Mean	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>Southwestern Division—Concluded</i>																																		
Neosho.....	Maximum...	55	68	68	81	79	44	65	68	65	52	67	82	77	82	80	66	72	78	75	77	80	80	71	74	83	81	53	54	76	79	67	70.9	
	Minimum...	28	42	45	50	34	24	25	39	45	39	34	42	62	52	55	41	32	50	50	37	59	62	43	33	61	41	42	44	44	54	36	43.4	
Nevada.....	Maximum...	56	62	58	81	74	45	65	69	61	54	67	79	75	70	66	61	72	81	71	79	82	78	63	76	85	69	62	57	75	74	71	69	64.9
	Minimum...	28	47	44	44	31	22	31	41	46	38	36	49	56	47	56	41	37	51	48	45	57	63	42	41	59	38	44	46	53	57	37	44	42.0
Sedalia.....	Maximum...	57	61	58	80	77	38	64	68	65	50	68	79	75	58	69	62	69	80	78	77	83	78	57	70	87	71	61	60	75	72	66	68.2	
	Minimum...	30	45	36	37	29	23	28	35	46	35	34	46	55	41	48	40	34	52	49	42	59	56	37	41	58	38	42	44	52	57	34	42.0	
Seligman.....	Maximum...	54	66	65	78	72	43	63	68	62	58	65	75	75	80	75	64	71	78	72	76	79	78	71	73	79	77	42	58	73	78	69	74.9	
	Minimum...	32	49	42	48	32	23	28	44	43	41	45	49	61	49	54	39	35	58	49	42	59	60	49	36	59	40	38	50	59	35	44.9		
Seymour(near).....	Maximum...	56	58	59	76	74	40	60	66	62	48	59	74	75	73	73	67	66	74	72	70	80	75	71	66	79	76	55	53	72	75	70	66.9	
	Minimum...	29	39	43	41	31	23	26	38	42	38	37	44	45	52	55	38	36	47	51	40	53	59	41	32	53	41	42	50	54	36	41.8		
Springfield.....	Maximum...	54	61	56	79	62	40	62	65	51	47	59	74	74	76	70	52	67	78	64	73	81	74	54	70	79	54	55	57	74	77	54	64.3	
	Minimum...	33	42	45	45	29	26	32	48	45	38	40	47	56	53	52	40	39	52	50	45	57	53	42	41	54	41	45	45	54	51	38	44.5	
Versailles.....	Maximum...	60	62	56	81	76	42	65	72	64	52	64	80	74	58	72	62	72	80	71	75	84	78	70	70	83	74	60	57	76	73	62	68.6	
	Minimum...	28	47	37	37	30	22	25	32	45	34	34	47	54	42	48	40	36	46	56	45	54	66	41	36	58	38	40	43	52	54	34	42.0	
Warrensburg.....	Maximum...	57	62	62	79	77	41	64	68	65	52	63	78	70	57	65	59	66	79	71	75	80	78	58	71	81	68	62	60	74	72	69	67.2	
	Minimum...	29	44	37	38	29	22	29																										

\* , ° , etc., indicate respectively 1, 2, 3, etc., days missing from the record to the preceding day, on which it almost always occurs. † Estimated. §§ Instruments are read in the morning; the maximum temperature then read is charged WBO, St. Louis, 4-29-38-1105.

Station	Data	Day of month																																Monthly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Lakeside ..... (Osage Dam)	{ Evaporation .....	.107	.131	.070	.052	.156	.100	.069	.124	.077	.038	.058	.116	.191	.109	.078	.325	.050	.122	.270	.142	.232	.314	.182	.154	.242	.278	.083	.194	.030	.402	.198	4.694	
	{ Mean temperature .....	40	42	47	60	42	34	42	48	44	50	58	56	53	53	59	46	56	58	54	58	66	68	82	52	64	48	54	62	64	50	198	52.5	
	{ Wind movement .....	30	79	56	86	74	138	35	40	31	55	50	22	56	50	75	130	56	13	71	38	49	87	85	55	90	143	13	54	78	99	92	2,059	

\*\*\* Evaporation included in next measurement.



1.05  
MS  
42  
0.4

nat. West.

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U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

# CLIMATOLOGICAL DATA

19  
**MISSOURI SECTION**  
ROSCOE NUNN  
ST. LOUIS, MO.  
Vol. XLII      APRIL 1938      No. 4  
PRICE: 5 CENTS A COPY; 25 CENTS A YEAR

## GENERAL SUMMARY

Following an extremely mild March, April set in with a strong reaction to colder. The first ten days were far below normal in temperature, with minimum readings eight to ten degrees below freezing on the 2d, 3d, and 9th at many stations. Killing frost occurred pretty generally as late as the 10th. But unusually mild weather prevailed during the remainder of the month, excepting three or four days, so that the monthly average temperature was considerably above normal.

The rainfall was slightly less than normal for the State as a whole. It was somewhat more than normal in the Northern Division, also in the Southwestern Division, but, for the first time in several months, the Southeastern Division received rather light rainfall. The good rains in the northwestern counties were very welcome, as parts of that section had been much too dry. The snowfall, with an average of 3.2 inches for the State, was the heaviest April snowfall since 1920 and the third heaviest average of record for April. Practically all of the snowfall occurred on the 7-8th, and it was heavy only in the northwestern half of the State; heaviest in the counties of Saline, Lafayette, Chariton, Jackson, and Cass, with maximum depth, 15.0 inches, at Marshall.

At the beginning of April vegetation was three or four weeks in advance of normal development; peaches, plums, and cherries were shedding blooms; sowing of oats was about completed, and early sown was up to good stands by April 5th. Peaches, plums, and cherries were severely hurt (completely wiped out in some localities) by the freezes of April 1 to 10. Fairly good apple crops were expected in at least parts of the western apple counties. By the end of the month corn planting was about half finished and some corn was up to good stands. Wheat was reported in good to excellent condition, but some was too rank in growth. Wheat had begun to head in some southwestern counties. Rye and barley were generally in fair to good condition. Meadows, pastures, and garden truck were generally better than normally advanced.

River stages were above normal at the beginning of the month, but declined to considerably lower than normal in the last decade.

## TEMPERATURE

The monthly mean temperature for the State, 82 stations reporting, was 56.7°, or 1.5° above normal. The highest monthly mean was 61.9° at Caruthersville, and the lowest monthly mean was 52.3° at Tarkio. The highest temperature recorded was 89° at Garber on the 19th and 30th, at Nevada on the 30th, and at Union on the 26th, and the lowest was 18° at Goodland on the 3d. The greatest daily range was 47° at Goodland on the 3d and at Union on the 19th.

## PRECIPITATION

The average precipitation for the State, 141 stations reporting, was 3.68 inches, or 0.23 inch less than normal. The greatest local monthly amount was 7.82 inches at Clinton, and the least local monthly amount was 1.25 inches at Parua. The greatest amount in any twenty-four hours was 3.50 inches at Amity on the 30th. The average number of days with 0.01 inch or more of precipitation was 10.

The snowfall averaged 3.2 inches, or 2.6 inches more than

normal. The greatest monthly amount was 15.0 inches at Marshall.

## MISCELLANEOUS PHENOMENA

Dust.—12th, 13th, 19th, 20th, 21st, 27th.

Floods.—In Black River, March 30th to April 2d; in Bourbeuse River, 1st-2d; in Meramee River, March 31st to April 3d; in Mississippi River below Cape Girardeau, March 31st to April (Continued on page 22)

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)				Wind				Relative humidity			
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12 noon	6:30 p. m.
Columbia.....	29.98	30.37	22	29.60	6	9.6	30	n.	27	76	53	66
Kansas City.....	29.96	30.40	22	29.57	6	12.3	33	w.	27	78	53	68
St. Joseph.....	29.97	30.37	22	29.61	6	11.1	30	w.	27	76	54	60
St. Louis.....	29.99	30.34	22	29.63	19	13.5	34	sw.	27	74	49	50
Springfield.....	29.98	30.31	22	29.55	6	11.5	31	s.	27	76	54	68
Cairo, Ill.....	30.01	30.29	22	29.51	8	10.2	28	s.	3	78	52	53
Keokuk, Iowa..	30.00	30.39	22	29.59	19	10.1	27	nw.	3	71	48	51

## COMPARATIVE DATA FOR APRIL

Year	Temperature			Precipitation					Number of days			
	Average for State	Highest	Lowest	Average for State	Average Northern Division	Average Southwestern Division	Average Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy
1888.....	57.9	94	20	1.92	1.54	2.37	1.85	....	5	..	..	..
1889.....	55.7	90	27	2.66	2.84	3.31	1.83	....	8	..	..	..
1890.....	56.2	93	25	3.58	2.26	3.43	5.05	....	8	..	..	..
1891.....	56.8	93	15	3.46	3.88	4.08	2.41	....	9	..	..	..
1892.....	53.1	90	24	5.83	5.14	5.35	7.01	0 0	11	9	8	13
1893.....	53.9	95	19	8.27	6.37	9.14	9.29	0 0	12	8	9	13
1894.....	56.1	95	20	3.11	2.24	3.52	3.58	T.	8	12	10	8
1895.....	57.9	100	24	2.04	1.87	2.08	2.17	T.	10	10	11	9
1896.....	61.9	92	17	3.57	3.10	4.35	3.25	0 0	9	11	12	7
1897.....	54.4	88	21	4.65	4.07	3.78	6.10	T.	10	10	11	9
1898.....	52.5	90	14	3.64	3.77	3.75	3.40	T.	10	12	9	9
1899.....	54.0	96	6	3.80	3.46	4.02	3.93	3.8	8	12	9	9
1900.....	56.7	89	21	3.50	3.05	3.66	3.78	0.7	9	11	10	9
1901.....	53.3	94	24	2.96	2.63	2.83	3.41	1.8	8	14	7	9
1902.....	53.9	95	19	2.82	1.98	3.30	3.18	T.	11	13	11	6
1903.....	55.9	91	26	3.37	3.97	3.34	2.79	1.2	9	11	10	9
1904.....	49.0	84	19	5.63	6.14	6.07	4.67	2.7	9	15	6	9
1905.....	54.9	92	20	3.09	3.66	2.28	3.34	0.3	6	14	8	8
1906.....	59.5	93	22	2.42	2.67	2.40	2.18	0 0	6	17	7	6
1907.....	48.7	89	16	3.33	2.62	3.83	3.55	T.	8	11	8	11
1908.....	56.6	90	18	5.89	2.55	6.58	8.53	T.	11	11	8	11
1909.....	54.8	93	19	4.72	4.36	3.60	6.21	T.	8	13	9	8
1910.....	54.8	97	21	3.58	2.74	3.55	4.45	0.9	11	12	7	11
1911.....	53.5	91	20	4.93	4.28	4.70	5.81	T.	10	12	8	10
1912.....	56.0	89	24	6.08	3.78	6.47	8.00	0.7	10	13	7	10
1913.....	56.2	94	25	3.32	3.36	3.10	3.50	T.	7	16	5	9
1914.....	55.2	91	18	3.14	2.57	3.11	3.75	T.	8	12	7	11
1915.....	61.9	96	18	2.12	1.93	2.64	1.79	T.	7	16	8	6
1916.....	53.5	93	21	3.32	2.77	3.93	3.27	1.9	10	11	8	11
1917.....	53.2	89	19	5.95	5.66	5.08	7.11	1.2	12	12	6	12
1918.....	50.8	93	19	5.33	3.61	5.26	7.11	0.9	11	12	6	12
1919.....	55.3	94	20	3.03	3.15	3.46	2.47	T.	9	12	7	11
1920.....	50.2	89	4	3.82	4.86	3.30	3.31	4.8	11	11	7	12
1921.....	56.0	91	19	5.36	4.70	5.22	6.16	1.1	10	13	7	10
1922.....	57.3	91	24	6.41	4.96	8.47	5.81	T.	11	13	6	11
1923.....	54.2	92	14	3.26	2.52	3.38	3.89	0.4	8	14	8	8
1924.....	56.6	95	11	2.15	1.26	2.78	2.40	T.	6	14	8	8
1925.....	61.0	92	24	4.12	4.73	3.52	0.0	0 0	10	12	9	9
1926.....	49.9	91	11	2.42	2.39	2.17	2.69	2.4	8	14	6	10
1927.....	57.7	94	18	8.68	6.73	8.61	10.70	T.	14	10	7	13
1928.....	51.6	88	16	4.86	2.76	5.46	6.37	0.2	8	13	7	10
1929.....	57.4	96	27	6.15	6.82	6.58	5.56	0 0	12	11	8	11
1930.....	59.1	96	23	2.02	1.89	2.77	1.39	0 0	8	14	8	8
1931.....	54.8	90	22	2.96	2.92	2.77	3.18	T.	9	14	6	10
1932.....	57.6	95	22	2.58	2.43	2.52	2.78	0 0	8	14	8	8
1933.....	54.9	88	22	3.84	2.08	3.82	5.62	0.7	10	11	9	10
1934.....	56.5	90	24	2.50	2.06	2.61	2.84	T.	7	16	8	6
1935.....	52.3	90	23	2.90	3.10	3.02	2.59	0.7	9	9	7	14
1936.....	53.0	95	9	2.45	2.00	1.93	3.41	0.5	8	16	7	7
1937.....	54.5	93	21	4.04	3.25	3.67	5.21	T.	10	10	8	12
1938.....	56.7	89	18	3.68	3.79	4.13	3.13	3.2	10	13	9	8
Period.....	55.2	100	4	3.81	3.38	4.05	4.30	0.6	9	12	8	10

Natural monthly normal  
3.68



## Climatological Data for April 1938

Stations	Counties	Elevation, feet	Temperature, in degrees Fahr.							Precipitation, in inches				Number of days			Prevailing direction of wind	Observers			
			Length of record, years	Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Length of record, years	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelting	With precip., .01 inch or more			Clear	Partly cloudy	Cloudy
Northern Division																					
Bethany	Harrison	916	43	53.1	+ 1.6	79	25†	23	2	40	45	2.50	-0.79	0.55	1.0†	10	16	7	7	sw.	A. S. Cumming
Brunswick	Chariton	652	57	54.2	0.0	85	26†	25	9†	41	59	4.86	+1.03	1.15	10.5	11	14	6	10	se.	O. K. Benecke
Canton, Lock & Dam 20	Lewis	488	0	53.8	.....	87	27	24	9	37	8	3.93	.....	0.98	4.0	10	7	7	16	w.	Lockmaster
Chillicothe	Livingston	779	29	54.0	+ 2.0	85	26	26	2	37	32	2.47	-0.75	0.68	2.7	11	14	6	10	nw.	Wm. J. Olenhouse
Clifton Hill	Randolph	731	39	53.2	- 0.3	80	19	21	9	32	29	4.59	+1.23	1.45	7.0	13	8	12	10	sw.	Dr. A. J. Bradsher
Columbia	Boone	740	48	56.2	+ 1.3	85	19	23	9	32	48	4.74	+0.97	1.41	5.8	9	8	14	8	s.	U. S. Weather Bureau
Conception	Nodaway	980	49	53.8	+ 1.6	80	25†	20	2	34	54	3.60	+0.87	0.87	2.5	7	11	12	7	sw.	Fr. Adelhelm Hess
Edgerton	Platte	856	18	54.3	+ 0.5	83	26	23	2	41	27	1.78	-1.30	0.43	3.1	9	18	1	11	sw.	Fred L. Stiff
Elsberry	Lincoln	449	7	55.7	.....	86	19†	28	3†	34	7	6.06	.....	1.45	0	10	8	15	7	nw.	Ray E. Mills
Fayette	Howard	680	58	55.3	+ 1.1	83	19	24	9	33	55	5.01	+1.46	1.21	4.0	11	16	5	9	sw.	Morrison Observatory
Fulton	Callaway	818	50	57.0	+ 2.4	86	19†	26	9	35	46	3.73	-0.28	1.35	1.5	11	12	7	11	sw.	Clyde C. Herring
Gorin	Scotland	700	.....	.....	.....	.....	.....	.....	.....	.....	51	5.38	+1.97	2.38	0.5	10	14	8	8	se.	W. L. Harker
Grant City	Worth	1,134	34	53.0	+ 0.8	82	26	21	2	38	46	4.19	+1.23	0.91	6.0	8	7	12	11	sw.	Howard Rybolt
Hannibal	Marion	759	46	54.8	+ 1.4	84	26†	26	9	32	54	4.00	+0.81	0.93	2.8	11	8	6	16	se.	Hannibal Water Dept.
Kansas City	Jackson	741	49	56.4	+ 1.6	86	30	27	2	36	49	1.87	-1.27	1.16	7.0	8	9	9	12	sw.	U. S. Weather Bureau
Kansas City University	Jackson	908	0	56.0	.....	84	30	25	2	35	0	2.07	.....	1.14	9.0	11	14	5	11	sw.	University of Kansas City
Kidder	Caldwell	1,020	46	52.9	+ 0.7	81	26	24	2	34	50	3.48	+0.20	1.16	2.0	10	14	6	10	nw.	Koscoe L. Terry
King City	Gentry	1,095	.....	.....	.....	.....	.....	.....	.....	.....	12	2.08	-1.22	0.42	3.0	7	4	20	6	sw.	John M. Martin
Kirksville	Adair	969	49	52.8	+ 0.9	81	26	24	9	33	56	3.36	-0.74	1.18	5.0	8	15	4	11	n.	Charles Noble
Lawson	Ray	1,050	0	54.0	.....	81	26†	25	2	32	0	4.08	.....	1.87	4.5	11	11	9	10	s.	Elmer E. Lamb
Linneus	Lincoln	816	.....	.....	.....	.....	.....	.....	.....	.....	6	4.82	.....	1.15	2.2	11	17	3	10	sw.	H. D. Taggart
Louisiana	Pike	469	44	54.0	0.0	85	18	24	3	38	57	4.09	+0.37	1.00	2.2	11	14	8	8	w.	Stark Bro's Nurseries
Macon	Macon	875	39	52.6	- 0.5	84	26	22	9†	38	45	3.95	+0.29	0.88	5.0	11	12	8	10	w.	Mrs. W. C. Brown
Maryville	Nodaway	1,169	48	52.8	+ 2.0	81	26	20	2	38	44	3.88	+0.87	1.27	5.5	12	12	6	12	nw.	R. B. Montgomery
Mexico	Audrain	800	49	54.8	+ 1.0	85	19†	21	9	39	60	4.52	+0.77	1.15	2.6	11	.....	.....	.....	sw.	Mrs. Abbie Snoddy
Moberly	Randolph	875	1	53.2†	.....	83	25	19	9	34	1	3.63	.....	0.85	5.0	12	16	6	8	s.	McCormick Hospital
Oregon	Holt	1,048	82	54.7	+ 2.0	84	30	22	2	34	82	3.40	+0.11	1.09	6.5	9	16	8	6	sw.	Miss Mina Wright
St. Charles	St. Charles	520	50	58.6	+ 3.0	88	19	29	3†	36	60	2.98	-0.77	0.85	0.3†	12	18	5	7	se.	Martin L. Comann
St. Joseph	Buchanan	957	28	54.7	+ 1.2	83	26	26	2	34	66	3.18	-0.01	1.26	4.0	10	11	6	13	s.	U. S. Weather Bureau
Steffenville	Lewis	650	40	53.3	+ 0.2	82	27	20	9	41	45	3.86	+0.28	1.26	6.0	12	14	9	7	s.	Frank Hall
Tarkio	Atchison	916	35	52.3	+ 0.1	85	30	22	2	43	44	2.76	-0.48	0.87	5.0	8	14	10	6	se.	Albert Volker
Trenton	Grundy	822	42	53.6	+ 0.9	82	26	25	2	34	43	3.21	-0.37	0.65	2.0	9	8	11	1	sw.	W. H. Estes
Unionville	Putnam	1,062	45	53.2	+ 2.2	85	30	22	2	40	45	3.49	-0.21	0.97	2.0	8	14	2	14	s.	John H. Schick
Warrenton	Warren	816	56	56.5	+ 1.7	86	19	26	9	34	48	4.28	+0.24	1.02	1.0	12	11	11	8	sw.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.	574	66	54.1	+ 1.8	82	26	27	9	26	66	3.17	+0.18	1.61	2.8	11	5	8	17	sw.	U. S. Weather Bureau
Division means and extremes		.....	.....	54.3	+ 1.2	88	19	19	9	43	.....	3.79	+0.41	3.50	3.8	10	12	8	10	sw.	.....
Southern Division																					
Appleton City	St. Clair	813	43	56.8	+ 0.7	86	30	26	2†	35	46	5.00	+0.87	1.30	7.0	9	18	1	11	sw.	Rolla Brown
Bolivar	Polk	1,071	35	58.5	+ 2.2	85	30	25	9	41	43	3.51	-0.66	1.01	2.5	9	13	12	5	sw.	Southwest Baptist College
Boonville	Cooper	650	0	55.8	.....	84	24	25	9	29	61	4.77	+0.90	1.38	5.0	13	14	9	7	s.	Boonville Water Dept.
Clinton	Henry	765	45	56.4	+ 0.1	83	19†	24	9	37	51	7.82	+3.65	2.45	3.5	12	.....	.....	.....	.....	U. S. Weather Bureau
Dean H.	McDonald	1,000	34	59.3	+ 2.6	86	30	24	2	43	39	1.74	-2.95	0.68	1.8	5	14	6	10	sw.	E. S. Taylor
Eldon	Miller	934	43	55.8	+ 0.4	84	19	23	9†	40	39	5.08	+0.92	1.18	8.0	10	8	14	8	n.	E. H. Shepherd
Garber	Taney	950	4	58.6	.....	89	19†	24	10	45	4	2.80	.....	0.63	0.1	7	9	3	18	se.	William H. Durham
Harrisonville	Cass	904	60	52.6	- 1.3	85	30	23	2†	39	63	3.54	+0.16	1.25	9.0	11	8	11	11	sw.	John H. Patterson
Jefferson City	Cole	557	48	54.6	- 1.4	84	19	23	9	35	56	6.20	+2.22	1.55	2.5	12	10	12	8	s.	Mrs. Frank Kliegel
Lakeside	Miller	595	7	57.6	.....	85	30	28	10	36	7	4.27	.....	1.17	.....	9	.....	.....	.....	sw.	W. S. Frame
Lamar	Barton	980	50	57.0	+ 0.4	88	30	23	9	39	57	3.71	-0.81	1.65	8.0	6	17	6	7	sw.	Jesse A. Mann
Lebanon	Laclede	1,265	50	57.2	+ 1.7	83	19	23	9	36	51	4.17	-0.18	0.95	3.0	8	14	7	9	s.	Mrs. Rosa E. Montellus
Lexington	Lafayette	688	53	55.4	+ 0.8	83	25†	26	9	33	54	5.62	+1.82	2.44	14.0	13	15	9	6	s.	Miss Carrie Loomis
Lockwood	Dade	1,078	32	58.1	+ 1.6	85	30	21	9	35	42	4.30	-0.23	1.39	8.0	8	19	8	3	sw.	Hubert A. Nieman
Marshall	Saline	779	51	55.6	+ 0.8	84	26	24	9	35	48	4.42	+0.53	1.00	15.0	13	18	5	7	sw.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	37	57.1	+ 2.2	87	30	25	9	35	41	4.72	+0.20	1.58	1.0	11	15	11	4	s.	Mo. Fruit Exp. Station
Mount Vernon	Lawrence	1,174	26	59.0	+ 2.9	85	30	21	9	33	38	4.19	-0.26	1.54	5.0	7	17	8	5	sw.	G. H. Boswell
Neosho	Newton	1,011	51	59.8	+ 1.5	86	30	25	9	40	55	2.25	-2.31	0.95	3.2	7	22	4	4	sw.	U. S. Fisheries Station
Nevada	Vernon	862	45	59.6	+ 3.9	89	30	25	9	35	46	3.17	-1.12	1.30	6.0	7	13	8	9	sw.	T. J. Kaupp
Sedalia	Pettis	910	25	56.4	+ 1.1	84	19†	21	9	36	27	5.03	+1.30	1.33	6.0	11	17	5	8	sw.	Mrs. Laura S. Trader
Seligman	Barry	1,542	32	57.5†	+ 0.9	84	30	24	2	37	35	4.32	+0.26	1.30	1.0	7	14	7	8	sw.	Floyd E. Fawer
Seymour (near)	Webster	1,642	32	55.4†	+ 0.3	81	19	24	9†	38	32	3.98	-0.34	1.32	T	11	15	7	8	s.	A. L. Hailey
Springfield	Greene	1,301	50	57.7	+ 1.7	84	30	26	9	31	50	3.50	-0.36	1.49	2.0	10	11	10	9	s.	U. S. Weather Bureau
Versailles	Morgan	1,037	11	57.0	+ 1.1	86	19	20	9	36	14	4.01	-0.43	1.04	7.0	10	11	9	10	sw.	E. M. Wilson
Warrensburg	Johnson	878	51	56.0	- 0.1	84	19	24	9	33	58	4.50	+0.84	1.68	8.0	11	13	6	11	sw.	J. A. Markey
Warsaw	Benton	687	37	57.8	+ 1.1	87	30	24	9†	39	43	5.98	+1.52	1.80	8.0	14	17	5	8	s.	Everett Martin
Division means and extremes		.....	.....	57.1	+ 1.1	89	19†	20	9	45	.....	4.13	+0.08	2.46	5.4	10	14	8			



## Daily Precipitation for April 1938

Stations	Drainage-basins	Day of month																														Total		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		..	
Northern Division																																		
Amity	Grand					T.	.48	.05	.20						T.	.12	.28	1.01	.13		T.					.14				.34	.34	3.50	6.59	
Bethany	do					.40	.23	.17	.10							.46	.55	.06							.09				.19	.22	.25	2.50		
Bowling Green	Mississppi					.20	.22	1.00	.65	.60						.19	.43	.13	.30		.17				.14				.18	.22	.36	3.86		
Brunswick	Grand					.02	.40	.28	1.10	1.15						T.	.43	.13	.30						.18				.11	.17	.70	4.86		
Canton, Lock No. 20	Mississppi						.75	.98	.28	.47						T.	.12	.04	.05		T.				.11				.02	.37	.76	3.93		
Chillicothe	Grand						.68	.02	.62							.02	.39	.19							.23				.02	.07	.23	2.47		
Clifton Hill	Chariton					T.	.31	.35	.95	1.45						.32	.15	.05	.12		.02				.03	.10			.17	.07	.57	4.59		
Columbia	Missouri	T.				.16	.52	T.	1.41	1.11						T.	.31	.03	T.		.42				.03				T.		.75	4.74		
Conception	do						.26	.15	.45							.78	.87					T.							.32			.77	3.60	
Edgerton	Missouri						.40	.03	.06	.43						.15	.29					T.			.04					.34			.04	4.42
Edina	Mississppi							.12	.92	.60	.80					.02	.35	.09	.07						.08					.31			.06	4.59
Elsberry	do					.50	1.24	1.45	.60	1.05	.05										.20				.18					.15			.64	6.06
Farber	do						.59	.16	.62	.89	.55						.38		.18						.15				.26			.47	4.58	
Fayette	Missouri					T.	.28	.37		.61	1.06	T.				.44	.45		.03	.60	.61			T.									.49	5.01
Fulton	do						.09	.11	.24	.48	1.35	.25					.36		.33						.07				T.			.10	.35	3.73
Gallatin	Grand							1.26	.10	.35	.40						.48		.10	.17					.29				T.			.33	3.48	
Gorin	Mississppi					T.		.28	2.10	.44	.48					.10	.31		.08						.10					.65			.84	5.38
Grant City	Grand						.34	.35	.60	.20						.60	.91	T.	T.											.47			.72	4.19
Hannibal	Mississppi						.03	.39	.93	.67	.44						.22		.16		.63				.04					.17			.32	4.00
Hermann	Missouri						.08	.14	.30	.35	.73	.83					.27		.10						.16					.44			.23	3.80
Kahoka	Mississppi																.27		.10														.38	5.15
Kansas City	Missouri					T.	.06	T.	.40	.85						T.	.17	.16	T.	T.				.15		T.				.07			.01	1.87
Kansas City University	do					.01	.09	.02	.16	1.14							.16	.25		.02				.02	.06					.14			T.	2.07
Kidder	Grand							.75	.06	.40							.04	.43		.10						.30				.04	.20		1.16	3.48
King City	Missouri						.41	.03	.27								.38	.36	T.		T.									.21			.42	2.08
Kirkville	Mississppi						.23	1.18	.30	.53							.11	.48		.16										.37				3.36
LaBelle	do							.92	.55	.49	.42						.11	.04	.05						.24								.50	3.91
Lawson	Missouri					.01	.23		.26	.72							.25	.23		.02				.03	.11		T.	.35					1.87	4.08
Linneus	Grand						.02	.59	.28	.85	.15						.74	.03	.01						.40								1.15	4.82
Louisiana	Mississppi					.10	.17	.40	.90	1.00							.20		.17	.20					.33					.30			.32	4.09
Lucerne	Grand							1.13	.58	.10							.07	.47	.16	.07					.03					.19			.25	2.80
Macou	Chariton						.04	.45	.23	.88	.69						.65	.18	.03						.10					.45			.25	3.95
Madison	Mississppi						.02	.13	.75	.85	.45						.42		.11		.69				.05					.20			.25	3.94
Maryville	Missouri						.40	.22	.88	.22						T.	1.27	.72	.01	.02		.02	.02		.04	T.		.06					T.	3.88
Memphis	Mississppi							1.12	.20	.19	.07						.27	.27	.22						.05					.40			1.10	4.89
Mexico	do					1.15	.10	.65	.72	.60							.45		.04	.33				.08					.05			.35	4.52	
Milan	Grand							1.35	1.07	.33	.12						.34	.45		.21		.04		.05		.61				.06			.46	4.63
Moberly	Mississppi						.20	.02	.70	.50	.12						.30		.25	.12	.30	.15		.08						.16			.85	3.63
Monroe City	do					.09	.16		.98	.90							.43		.15		.32				T.					.18			.11	3.82
Oregon	Missouri						.40	.11	.40	.56							1.09	.49		.03									.15				.17	3.40
Palmyra	Mississppi							.51	.40	.45	.75						.16		.05		.29				.07								.26	2.94
Paris	do							.30	.60	.61	.61						.23		.09		1.10			.12					.10			.59	4.35	
Perry	do							.34	.67	.50	.45						.30		.10		.68				.05					.36			.25	3.75
Philadelphia	do						.05	.34	.67	.50	.45						.23		.09		1.10				.12					.10			.59	4.35
St. Charles	do						.35		.43	.25	1.30						.52		.14		.05				.31					T.			.42	2.48
St. Joseph	Missouri					.02	.10	.05	.11	.85	.33						.18		.14		.05				.17					.19		.09	.35	3.18
Saverton, Lock No. 22	do						.44	.04	.53	.29						14	.13	1.16	T.		T.			.17				.05					.35	3.86
Shelbina	Mississppi						.08	.47	.74	.32	.22						.24		.11		.05				.08					.10			.17	2.98
do	do						.08	.63	.16	.13	1.36						.24		.11		.05				.08					.18			.05	3.11
Shelbyville	do							.54	.27	.08	1.53						.24		.22						.08					.10			.17	2.98
Steffenville	do						.25	.85	.55	1.26							.60	.87	.11			.08		.02	.10					.04	.12	.05	.15	3.86
Tarkio	Missouri						.38	.52	.15								.27		.20						.02	.10				.18			.05	3.11
Trenton	Grand						.52	.64	.65								.34	.10	.11		T.			.06					.07				.26	4.33
Troy	Mississppi						.65	.36	1.12	.50	.65						.32		.07		.06			.09		.07				.26			.34	4.33
Unionville	Chariton						.97	.53	.28								.42		.10															



## Daily Precipitation for April 1938—Continued from preceding page

Stations	Drainage-basins	Day of month																																	Total		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	..					
Southeastern Div.—Continued																																					
Birch Tree (near).....	Black.....							.21	1.02	.03							1.77					.06							.20		.98		4.27				
Bragg City.....	St. Francis.....							T.	.85	.05							.27	1.15		T.		.35							T.		.58		2.25				
Campbell.....	do.....							.48	.38	.09							.26	.10	T.		T.	.04	.02						.10		.52		1.93				
Cape Girardeau.....	Mississippi.....					.01		.02	.76	.05							.18		T.			.01							.12		.48		1.63				
Caruthersville.....	do.....								.85	.06	.06						.19	.10				.41									.13		1.90				
Centerville.....	Black.....				.20				1.07	.07							1.61		.08		.13	.10	.08								.79		4.13				
Crystal City.....	Mississippi.....		T.			.02		.02	1.42	.11							.59	T.			.11								.10		.52		2.89				
Cuba.....	Meramec.....								1.10								1.40				.50								.45		.69		4.14				
Dexter.....	St. Francis.....							T.	1.03	.20							.23						.30			T.			.39		.45		2.51				
Doniphan.....	Black.....							.35	.55	.13							2.00					.08			.10				.39		.85		4.45				
Farmington.....	St. Francis.....		T.					.46	1.00	.06							.89	.11	T.		.06	.01						.27		.72		3.58					
Fisk.....	do.....				.24		.01	.02	1.13	.04							.14			T.	T.	T.	T.		.11				.16		.24		2.09				
Fredericktown.....	do.....								1.19	.03							1.36					.07							.08		.45		3.18				
Goodland.....	Black.....							.27	1.06	.07							.98		.24		.15	.15			.04				.04	.61			3.61				
Greenville.....	St. Francis.....							.30	T.								1.23						T.						.34			.67	2.54				
Jackson.....	Mississippi.....							.30	.76	.21							.36					.02							.30		.59		2.54				
Jerome.....	Gasconade.....					.06					T.						.43		.15		.45								1.05		.90		3.14				
Koshkonong.....	Black.....							.18	.58	.07							1.88				.03	.10							.20		.75		3.79				
Leeper.....	do.....								.81	.15							1.53	.05				T.	.05		.22				.40		.63		3.84				
Licking (near).....	Gasconade.....							.30	1.10	.05							.55		.15		.60	.10							.15	1.60		4.60					
Marble Hill.....	Mississippi.....							.20	.50	.20							.60					.05			.05				.60		.65		2.85				
Meramec Park.....	Meramec.....								1.15	.45							.53		.03		.30								.25		.85		3.56				
Morehouse.....	Mississippi.....							T.	.47	.26	.13						.15		T.				.04		T.				.28		.43		1.76				
New Madrid.....	do.....							.02	.78	.09							.08	.14		T.		.01	.10			.02			.43		.21		1.88				
Owensville.....	Gasconade.....					.37		.10	1.10	.50							.46				.21								.46		.62		3.82				
Pacific.....	Meramec.....				.08	.04			.85	.47									.65		.30									.25		.32		1.25			
Parma.....	St. Francis.....								.58	.10							.64						T.	.05		.10				.30		.50		3.05			
Poplar Bluff.....	Black.....								1.28	.12							.15		.05		.30				.02					.10		.79		3.01			
Rhodes.....	Meramec.....						.05		1.35	.20							.64		.06											.30		.50		3.01			
Rolla.....	do.....							T.	.30	.81	.02						.15		.05		.30				T.				1.20		1.01		4.23				
St. Louis.....	Mississippi.....		T.		.07	.09	.15	.43	.93	T.							T.	.45		.09	T.	.10			T.	.09			.07	.02	.62	.23	3.34				
St. Louis Airport.....	Missouri.....		T.		.11	.05	.04	.39	1.05								.48		.20	.03	.07			.01	.20				.06		.27	.10	3.06				
St. Louis University.....	Mississippi.....			.09	.06	.19	.44	.86									.42		.06		.07				.11				.03	.03	.50	.31	3.17				
Salem.....	Meramec.....		T.					T.		1.10	.40						.81		.05		.27	.05	.08						.20		.92		3.88				
Sikeston.....	Mississippi.....							.02	.55	.15							.22			.02		.01	.05						.33		.48		1.83				
Union.....	Meramec.....		T.		T.	.13	.02	.31	1.37	.10							.50		.05		.30			.10					.14		.69		3.71				
Valley Park.....	do.....					.10	.07	.05	.55	.78							.60	.04	.08		.21			.05					.06		.60		3.19				
Van Buren.....	Black.....							.40	.27								2.00												.26		.60		3.53				
West Plains.....	do.....		T.					.32	.86	.03							T.	1.88		T.		.02	.05						.46		.89		4.52				
Williamsville.....	do.....								1.16	.12							1.67			.01			.05		.17				.19		.53		3.90				
Willow Springs (near).....	White.....								1.47	.12							1.21		.03		.09		.06						.26		.60		3.84				
Zalma.....	Mississippi.....								.70								.90								T.				.20				1.80				
Cairo, Ill. ....	do.....					T.	T.	.14	.49	.02							.04		.01		.01	.03			.01				.11		.41		1.27				

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. †† Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. T. Trace, or less than 0.01 inch.

\*\*\* Regular U.S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. \*\* Precipitation in the next following measurement; separate dates of fall not recorded. \* Precipitation is for 24-hour period, midnight to midnight † Estimated. ‡ Partially estimated. |||| Incomplete.

**Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for April 1938**  
(See precipitation data in table on preceding page)

Station	Data	Day of month																														Monthly	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		..
Lakeside ..... (Osage Dam)	{ Evaporation .....	.207	.154	.143	.192	.129	.095	.132	†††	.004	.116	.230	.181	.200	.324	.219	.056	.382	.244	.232	.396	.149	.150	.223	.253	.196	.258	.351	.295	.254	.402	...	6.165
	{ Mean temperature .....	42	42	48	50	54	60	36	34	37	46	55	60	64	68	66	66	68	68	67	61	55	52	59	68	68	70	71	62	64	72	..	57.6
	{ Wind movement .....	95	113	93	70	63	66	72	83	106	53	75	69	24	80	76	70	140	57	29	105	17	51	54	59	22	36	71	107	72	28	..	2,056

Observations taken at 7:30 a.m. For description see April 1932 report.

\*\*\* Evaporation included in next measurement. ††† —.002.

*Continued from page 19*

24th; in St. Francis River, March 30th to April 5th, 11th, and 18th to 20th.

Fog.—Dense, 19th, 25th, 30th.

Frost.—Light, 1st, 2d, 3d, 4th, 9th, 10th, 12th, 22d, 23d, 29th; heavy, 3d, 4th, 10th, 22d; killing, 1st, 2d, 3d, 4th, 6th, 7th, 8th, 9th, 10th, 11th, 21st, 22d.

Glaze.—6th, 7th, 8th.

Hail.—Light at one or more stations on 5th, 6th, 7th, 8th, 16th, 17th, 18th, 19th, 23d, 27th, 29th, 30th; moderate at a few stations on 16th, 27th, 29th; heavy on 27th near Lawson and on 29th locally in De Kalb, Clinton, Lafayette, and Linn counties, with damage to crops, windows, and roofs (amount not estimated).

Halos.—Solar, 6th, 11th, 12th, 13th, 14th, 17th, 19th, 21st, 23d, 25th, 27th; lunar, 5th, 12th, 13th, 14th, 15th, 19th.

Sleet.—6th, 7th, 8th.

Thunderstorms.—Local, 5th, 7th, 8th, 15th, 16th, 17th, 18th, 19th, 20th, 24th, 26th, 28th; more or less general, 6th, 23d, 27th, 29th, 30th.

Windstorms.—Storms of considerable severity on the 27th in Nodaway, Linn, and Knox counties, caused some property damage. On the 29th damaging winds occurred in parts of Clinton, DeKalb, and Ray counties, especially near Lawson and Cameron. On the 30th slight damage from wind in parts of Gentry and Texas counties.

**ERRATA**

March 1938, page 14: Greatest precipitation in 24 hours at Louisiana should be 0.83; date of minimum temperature at West Plains should be 17.



## Daily Temperatures for April 1938

Stations	Day of month																															Mean	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Northern Division																																	
Bethany.....	Maximum...	44	44	56	50	48	40	37	40	54	57	66	72	76	73	68	64	78	77	73	75	65	61	60	74	79	78	74	68	77	79	...	63.6
Bethany.....	Minimum...	30	21	28	27	35	34	28	30	27	30	41	32	52	58	58	52	51	50	61	48	40	29	44	52	53	60	60	54	41	51	...	42.6
Brunswick §§.....	Maximum...	40	44	61	53	57	50	36	36	48	55	64	72	79	74	67	75	81	78	82	71	64	64	70	78	82	85	85	67	78	80	...	65.9
Brunswick §§.....	Minimum...	32	29	28	35	38	38	32	30	25	26	38	38	54	61	58	53	54	53	44	36	36	49	54	54	62	51	46	47	...	42.6		
Canton, Lock No. 20.....	Maximum...	45	37	53	47	47	42	37	35	48	59	64	71	78	73	74	71	78	76	81	65	65	61	60	74	74	85	87	67	72	73	...	63.3
Canton, Lock No. 20.....	Minimum...	32	30	34	30	33	34	33	30	24	29	44	42	41	53	54	59	57	53	58	51	43	38	47	52	51	60	62	52	45	54	...	44.2
Chillicothe §§.....	Maximum...	39	47	58	49	48	40	32	37	50	56	64	72	79	74	69	69	80	78	78	70	61	64	63	79	83	85	81	69	80	83	...	64.6
Chillicothe §§.....	Minimum...	30	26	28	33	35	37	30	27	27	31	41	38	52	57	60	53	52	52	56	49	43	33	46	52	53	58	62	48	43	52	...	43.5
Clifton Hill.....	Maximum...	47	38	59	52	43	43	35	33	42	56	57	73	79	73	71	73	79	74	80	65	62	60	70	77	77	75	65	72	75	...	62.7	
Clifton Hill.....	Minimum...	40	27	29	35	38	34	31	28	21	26	41	41	52	60	59	53	53	50	52	51	45	34	44	51	52	61	62	49	45	54	...	43.6
Columbia.....	Maximum...	40	40	60	49	50	61	34	34	44	62	68	73	80	75	71	74	80	76	85	67	65	64	69	78	83	84	82	67	78	78	...	65.7
Columbia.....	Minimum...	34	31	32	39	39	34	32	28	23	32	47	43	58	64	60	60	56	58	56	54	41	38	48	59	56	64	62	51	46	57	...	46.8
Conception.....	Maximum...	47	44	55	53	47	45	33	38	50	58	68	73	79	76	70	64	78	77	75	72	68	64	61	78	80	80	80	75	80	80	...	64.9
Conception.....	Minimum...	27	20	28	32	35	32	26	27	27	29	46	40	52	60	56	51	50	51	60	46	44	34	44	49	56	58	56	46	51	...	42.6	
Edgerton.....	Maximum...	46	47	60	56	46	47	36	38	52	57	67	72	78	73	69	64	80	80	76	72	61	62	61	79	81	83	78	73	81	...	65.2	
Edgerton.....	Minimum...	30	23	32	39	38	36	29	27	28	28	46	32	52	63	59	51	51	51	60	48	40	27	46	47	54	60	61	47	40	58	...	43.4
Elsberry.....	Maximum...	52	41	59	53	48	48	39	35	47	60	68	73	80	76	77	78	77	76	86	82	67	62	67	79	82	86	83	77	76	75	...	67.0
Elsberry.....	Minimum...	33	30	28	33	39	39	33	33	29	28	38	48	49	53	56	60	59	55	52	53	40	36	38	52	60	53	57	53	48	56	...	44.4
Fayette.....	Maximum...	50	41	60	60	45	52	39	33	43	60	65	73	79	74	69	71	79	75	83	81	64	68	68	76	81	82	81	70	70	79	...	65.6
Fayette.....	Minimum...	32	29	30	38	38	38	32	29	24	27	41	41	50	60	58	54	54	56	53	44	36	41	52	55	60	60	50	46	56	...	45.0	
Fulton§§.....	Maximum...	43	51	61	50	59	52	34	34	48	64	69	75	82	78	73	76	79	80	86	69	68	65	70	80	84	86	84	70	79	79	...	67.6
Fulton§§.....	Minimum...	33	31	30	39	39	42	33	26	29	43	46	50	62	61	60	56	57	57	53	43	38	45	54	56	61	60	52	46	58	...	46.4	
Grant City.....	Maximum...	46	44	54	52	48	48	31	38	51	59	65	72	77	75	70	62	78	72	72	64	64	59	76	80	82	78	70	77	80	...	64.0	
Grant City.....	Minimum...	28	21	27	29	34	31	27	28	28	29	44	34	52	59	58	49	52	50	57	46	43	29	44	49	53	59	59	47	40	52	...	41.9
Hannibal.....	Maximum...	47	41	58	52	48	43	34	34	45	60	67	72	79	75	78	77	78	76	79	66	69	61	63	77	78	84	84	74	73	74	...	64.9
Hannibal.....	Minimum...	31	27	29	32	35	33	31	30	26	30	44	46	53	60	57	59	55	54	58	52	37	38	44	52	52	62	62	52	46	55	...	44.7
Kansas City.....	Maximum...	42	46	61	56	47	51	34	36	51	60	66	74	78	75	71	66	81	81	80	71	60	65	66	82	82	83	80	70	82	80	...	66.1
Kansas City.....	Minimum...	31	27	38	39	40	34	30	28	30	35	47	38	60	64	62	51	52	57	57	53	46	38	52	54	56	65	66	48	48	61	...	46.6
Kansas City Univ.....	Maximum...	51	46	61	58	48	45	38	36	48	58	66	74	79	74	70	65	80	78	82	70	67	64	62	75	79	81	76	71	79	79	...	66.1
Kansas City Univ.....	Minimum...	32	25	34	39	40	38	30	27	30	29	44	39	54	62	60	50	54	56	61	55	45	35	49	53	57	61	63	47	46	60	...	45.8
Kidder.....	Maximum...	40	40	53	47	44	44	40	37	49	55	61	68	74	73	67	65	75	75	72	67	64	62	75	79	81	76	71	79	79	...	62.5	
Kidder.....	Minimum...	29	24	29	33	36	34	30	26	26	30	42	40	51	58	58	50	51	51	59	48	46	31	45	50	53	58	62	48	45	53	...	43.3
Kirksville.....	Maximum...	48	38	55	53	47	41	33	36	49	55	63	70	76	73	70	67	78	75	76	69	66	63	60	76	78	81	79	67	73	80	...	63.2
Kirksville.....	Minimum...	30	25	25	26	32	33	29	26	24	29	43	37	48	61	58	57	53	52	58	48	39	35	43	50	50	65	57	49	42	50	...	42.5
Lawson.....	Maximum...	44	46	59	55	46	45	34	35	49	54	66	71	77	78	70	65	79	78	77	69	59	63	60	79	80	81	77	71	79	81	...	64.2
Lawson.....	Minimum...	29	25	31	37	36	34	29	26	26	29	41	43	54	60	58	48	51	52	60	48	46	33	45	51	55	59	62	46	47	57	...	43.9
Louisiana.....	Maximum...	52	43	50	55	50	50	33	33	50	55	55	74	80	80	80	80	77	85	66	63	67	75	75	80	80	75	80	72	75	77	...	65.6
Louisiana.....	Minimum...	33	28	24	28	35	32	31	30	29	28	38	40	44	46	60	58	52	52	39	39	41	47	42	47	54	60	54	45	53	...	42.3	
Macon§§.....	Maximum...	41	45	58	50	46	42	37	32	48	58	68	72	80	76	71	72	80	77	71	65	62	63	79	82	84	80	65	65	76	78	...	64.1
Macon§§.....	Minimum...	29	25	26	31	32	34	30	28	22	22	39	41	42	55	58	56	53	52	54	48	43	34	37	44	49	50	58	49	46	...	41.1	
Maryville.....	Maximum...	45	43	53	50	47	36	31	38	50	58	65	73	78	77	71	60	79	77	72	70	64	63	60	75	80	81	77	72	80	80	...	63.5
Maryville.....	Minimum...	27	20	28	33	35	31	27	26	30	45	37	51	60	55	51	49</																



## Daily Temperatures for April 1938—Continued from preceding page

Stations		Day of month																														Mean	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
Southwestern Division—Concluded																																	
Neosho .....	Maximum...	58	47	65	71	76	77	75	37	48	63	68	77	79	77	70	72	77	81	84	82	63	67	74	82	88	84	79	77	82	86	72.0	
	Minimum...	34	28	31	43	51	63	35	29	25	28	48	38	48	61	61	57	58	58	54	50	51	37	43	57	57	56	65	50	43	66	47.5	
Nevada .....	Maximum...	48	50	68	65	72	80	54	34	49	66	70	77	82	75	72	72	84	84	86	69	68	68	75	81	84	87	81	76	85	89	71.7	
	Minimum...	33	27	36	40	44	53	33	29	25	32	44	44	51	61	60	56	52	56	61	52	47	36	48	56	61	62	64	49	50	65	47.7	
Sedalia .....	Maximum...	49	45	63	61	49	60	41	34	45	62	65	75	80	76	67	70	80	79	84	69	68	64	70	79	83	84	82	69	82	80	67.2	
	Minimum...	31	29	32	39	40	38	31	29	21	29	45	43	53	61	60	57	53	54	00	50	43	34	46	54	56	61	64	49	46	64	45.7	
Seligman .....	Maximum...	53	46	61	68	76	72	69	36	48	62	67	75	77	73	68	71	74	78	80	76	56	65	73	76	80	79	76	..	79	84	*68.9	
	Minimum...	33	24	34	43	48	52	34	28	28	30	46	49	54	51	56	54	54	51	58	50	49	37	43	58	43	57	61	..	48	65	*46.1	
Seymour(near).....	Maximum...	51	40	61	67	69	72	70	33	44	59	66	73	76	69	68	71	71	75	81	78	56	63	65	78	77	77	76	71	78	..	..	*66.7
	Minimum...	32	25	28	40	40	59	32	30	24	24	41	40	51	55	58	50	51	63	50	48	45	38	40	42	55	57	58	50	45	55	41.2	
Springfield .....	Maximum...	44	42	60	69	72	77	54	33	44	63	66	74	78	70	68	69	74	76	82	61	59	63	70	79	78	79	77	68	79	84	67.1	
	Minimum...	31	27	33	45	45	54	31	29	26	32	47	52	57	60	58	57	54	60	59	50	47	41	45	58	60	62	61	51	55	62	48.3	
Versailles .....	Maximum...	50	41	62	59	50	74	46	32	44	64	68	78	81	78	68	71	76	79	86	72	64	62	72	84	82	83	81	72	83	78	68.1	
	Minimum...	30	20	31	38	40	46	32	29	20	28	43	44	53	61	62	58	54	57	56	50	44	34	45	57	56	60	63	49	47	58	45.8	
Warrensburg .....	Maximum...	50	44	62	56	48	61	41	32	46	58	67	73	78	74	69	68	80	78	84	69	65	61	59	79	81	83	79	71	80	81	65.9	
	Minimum...	32	29	35	38	40	41	31	27	24	32	45	43	54	62	59	56	53	54	59	52	45	34	47	54	55	63	63	48	47	58	46.0	
Warsaw .....	Maximum...	50	45	65	64	56	78	49	37	45	63	68	76	80	75	69	71	80	79	84	71	65	65	71	80	83	88	82	74	84	87	69.3	
	Minimum...	33	28	31	40	42	49	33	30	24	24	45	39	49	62	62	56	54	56	58	52	45	36	47	55	57	63	66	50	46	57	46.3	
Southeastern Division																																	
Advance .....	Maximum...	61	52	63	67	67	70	63	43	52	59	66	75	79	76	79	75	80	83	84	75	72	64	71	77	82	84	83	78	81	76	71.2	
	Minimum...	41	37	29	43	45	62	42	39	33	30	44	44	50	58	61	62	59	57	50	58	50	45	36	48	50	54	62	62	46	00	48.6	
Arcadia §§.....	Maximum...	57	46	68	64	65	73	41	38	52	61	67	78	79	74	77	77	78	81	87	61	71	66	71	82	82	83	82	75	84	79	70.0	
	Minimum...	35	31	26	36	40	43	38	35	27	25	40	45	48	59	60	57	57	55	45	52	41	40	34	49	54	52	52	60	46	56	44.7	
Birch Tree(near)....	Maximum...	54	46	65	69	69	73	70	38	49	61	63	76	78	69	73	78	77	81	85	78	65	66	71	82	80	80	79	78	83	85	70.7	
	Minimum...	33	32	26	38	42	60	38	34	28	24	46	44	51	51	59	57	51	54	52	52	51	43	37	52	52	56	62	56	53	54	46.3	
Campbell .....	Maximum...	65	58	63	69	73	71	65	45	53	59	66	77	80	78	79	74	82	83	84	76	70	67	72	77	82	83	82	80	83	79	72.5	
	Minimum...	43	38	31	43	46	62	44	40	34	32	40	48	55	55	60	61	58	67	56	60	52	41	42	50	53	57	56	63	55	59	50.0	
Caruthersville §§....	Maximum...	65	54	65	71	78	71	63	47	57	63	69	78	81	78	84	76	81	85	82	72	76	71	75	79	83	87	85	87	87	80	74.3	
	Minimum...	48	39	30	31	43	51	55	43	35	32	46	48	56	58	61	59	58	59	63	55	49	46	47	55	57	58	61	58	56	..	49.5	
Crystal City §§.....	Maximum...	51	..	61	60	58	77	39	37	..	62	70	78	82	77	79	..	79	80	85	64	70	63	..	84	83	87	85	73	80	..	..	*70.6
	Minimum...	32	33	26	..	41	44	36	35	29	27	..	47	51	55	60	58	..	54	46	51	44	39	36	..	52	52	54	62	42	56	..	d44.7
Doniphan .....	Maximum...	64	51	69	70	72	72	70	45	55	62	72	79	80	77	80	77	82	80	85	77	72	68	72	77	83	85	84	80	85	88	73.8	
	Minimum...	37	37	25	37	45	53	42	37	32	26	36	42	49	52	49	61	56	51	51	59	49	41	35	49	48	51	56	61	46	00	45.8	
Farmington .....	Maximum...	56	42	65	61	61	75	66	37	49	62	66	77	80	75	78	76	78	80	87	77	69	61	71	83	85	85	83	75	80	75	70.5	
	Minimum...	37	32	27	40	39	55	35	34	27	28	42	48	50	58	60	57	57	55	48	51	48	39	37	55	53	55	60	60	47	56	46.3	
Goodland .....	Maximum...	60	44	65	65	63	74	69	37	49	61	68	78	80	75	76	76	78	80	79	85	67	64	70	83	80	80	80	82	74	84	82	70.9
	Minimum...	29	31	18	37	41	59	35	34	27	21	37	40	41	56	60	45	45	58	56	41	42	33	30	48	49	48	50	60	40	46	41.9	
Greenville .....	Maximum...	61	45	63	64	66	70	65	43	51	57	67	74	76	72	73	74	75	72	83	74	65	61	69	77	76	78	74	80	76	79	68.7	
	Minimum...	38	31	22	39	41	61	38	35	32	35	40	45	50	55	60	55	61	42	54	45	42	29	47	54	53	60	41	44	57	..	44.3	
Jackson .....	Maximum...	63	56	64	67	66	70	65	52	48	62	66	73	76	80	81	77	74	83	83	86	67	69	69	80	86	81	83	82	83	82	72.5	
	Minimum...	36	34	26	37	43	59	41	38	30	27	41	39	50	57	58	60	58	56	48	56	50	43	39	50	53	54	58	61	45	57	46.8	
Koshkonong .....	Maximum...	57	49	64	70	72	71	67	41	50	50	66	76	79	73	74	..	78	80	85	77	55	65	70	78	81	81	80	74	80	83	..	*69.9
	Minimum...	37	32	30	43	44	60	39	34	29	30	42	49	53	57	59	..	55	56	56	54	51	44	41	53	58	57	59	57	57	..	48.1	
Licking(near).....	Maximum...	57	42	64	64	66	73	72	35	44	61	68	76	79	76	72	78	76	78	85	84	64	64	71	87	80	82	81	76	85	..	..	*70.3
	Minimum...	32	30	28	36	41	61	34	31	25	25	41	40	47	59	59	58	53	55	50	43	49	37	38	56	54	55	60	54	44	..	..	*44.7
Marble Hill .....	Maximum...	64	53	68	65	67	71	64	42	53	59	66	77	79	77	80	75	80	83	85	75	73	65	71	79	83	84	81	79	83	79	72.0	
	Minimum...	35	35	25	38	42	60	41	37	39	26	41	44	49	58	60	60	61	56	40	55	40	43	33	49	52	52	62	61	44	59	46.6	
Poplar Bluff .....	Maximum...	64	54	65	69	72	69	60	42	57	61	67	76	79	72	79	77	80	81	85	85	73	71	76	6								



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# CLIMATOLOGICAL DATA

19  
**MISSOURI SECTION**  
W. J. MOXOM  
ST. LOUIS, MO.  
Vol. XLII MAY 1938 No. 5  
PRICE: 5 CENTS A COPY; 25 CENTS A YEAR

## GENERAL SUMMARY

Temperatures throughout the State were much above normal for the first four or five days, and were followed by a rather cool period extending to about the middle of the month, with minima ranging from 32° to 34°. During the latter half of the month temperatures were quite variable, but the general tendency was above normal.

There were frequent rains throughout the State, many of which were heavy to excessive, especially in the Southwestern Division. The generally wet weather frequently interfered seriously with farm activities. During the last few days of the month fair weather prevailed at most stations. Dry, warm weather is urgently needed for further planting, cultivation, and development of crops.

By the close of the month about 15 per cent of the intended corn acreage remained to be planted. Some of the most advanced corn was about eight inches high and had been cultivated once. There were some fields damaged by cutworms which may require replanting. Wheat made fair progress. There is considerable rank growth and some reports of lodging. The condition of the crop is generally fair to very good. Oats, barley, and rye are generally better than the average. Truck crops and vegetables are in excellent condition.

Minor floods occurred during the latter part of the month in the Missouri below the mouth of the Osage, Meramec, Bourbeuse, and Osage.—H. C. G.

## TEMPERATURE

The monthly mean temperature for the State, 81 stations reporting, was 65.0°, or 0.6° above normal. The highest monthly mean was 70.0° at Caruthersville, and the lowest monthly mean was 62.0° at Tarkio. The highest temperature recorded was 94° at Caruthersville on the 21st, and the lowest was 32° at Lonisiana on the 13th. The greatest daily range was 41° at Dean on the 15th.

## PRECIPITATION

The average precipitation for the State, 140 stations reporting, was 6.13 inches, or 1.35 inches more than normal. The greatest local monthly amount was 12.21 inches at Dean, and the least local monthly amount was 2.21 inches at Dexter. The greatest amount in any twenty-four hours was 3.86 inches at Harrisonville on the 23d-24th. The average number of days with 0.01 inch or more of precipitation was 13.

There was no snow recorded anywhere in the State.

## MISCELLANEOUS PHENOMENA

Dust.—4th, 14th, 15th.

Floods.—In Bourbeuse River 25-26th. In Meramec River 23d-27th. In Missouri River 21st-25th. In Osage River 23d-24th. In St. Francis River 26-27th.

Fog.—Dense, 19th, 26th, 28th, 30th.

Frost.—Light, 8th, 13th; no damage.

Hail.—Heavy on 6th at Lathrop with severe damage (unestimated); 7th at Neosho; 27th near Joplin with considerable damage (unestimated); 29th at Dean with some crop damage (unestimated.)

Halos.—Solar, 1st, 2d, 3d, 4th, 5th, 6th, 11th, 12th, 13th, 22d, 24th, 25th, 31st; lunar, 7th, 11th, 12th.

Thunderstorms.—Local, 2d, 3d, 5th, 6th, 8th, 9th, 12th, 13th, 14th, 16th, 17th, 20th, 30th; more or less general, 4th, 7th, 11th, 18th, 19th, 21st, 22d, 23d, 25th, 26th, 27th, 28th, 29th, 31st.

Tornadoes.—4th (See special tornado report).

Windstorms.—On the 4th at Brunswick, Crystal City, Fulton, Jackson, near Licking, and St. Louis. In St. Louis the  
(Continued on page 28)

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind				Relative humidity			Percentage of sunshine
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12 noon	6:30 p. m.	
Columbia.....	29.88	30.22	24	29.31	4	8.2	27	sw.	4	83	63	61	58
Kansas City.....	29.87	30.24	24	29.18	4	10.3	34	sw.	18	84	58	63	61
St. Joseph.....	29.88	30.23	24	29.24	4	9.1	27	w.	4	85	58	60	60
St. Louis.....	29.90	30.22	24	29.46	4	11.7	38	sw.	4	75	55	60	55
Springfield.....	29.89	30.22	24	29.38	4	10.5	32	s.	4	84	68	64	49
Cairo, Ill.....	29.92	30.20	24	29.55	4	8.7	26	nw.	79	79	56	62	70
Keokuk, Iowa...	29.89	30.23	24	29.35	4	8.1	31	w.	5	78	55	58	66

## COMPARATIVE DATA FOR MAY

Year	Temperature			Precipitation					Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. -01 in. or more	Clear	Partly cloudy	Cloudy
1888.....	62.1	93	30	4.98	6.23	4.73	3.98	....	5	..	..	..
1889.....	63.5	100	28	6.06	7.41	6.91	3.87	....	5	..	..	..
1890.....	62.8	97	26	3.65	2.91	4.62	3.43	....	6	..	..	..
1891.....	61.5	97	27	4.11	4.84	3.87	3.62	0	8	..	..	..
1892.....	60.7	91	28	9.04	8.72	10.11	8.28	0	17	5	9	17
1893.....	61.8	94	30	6.14	5.74	6.11	6.56	0	10	11	11	9
1894.....	63.7	96	29	4.31	2.60	5.18	5.14	0	8	18	11	7
1895.....	64.6	103	28	3.95	4.01	5.45	2.40	0	9	18	12	6
1896.....	70.1	96	37	9.17	9.00	10.29	8.22	0	12	12	12	7
1897.....	62.4	93	28	2.60	2.64	2.68	2.47	0	7	16	11	4
1898.....	65.2	97	31	7.68	8.36	7.81	6.88	0	14	12	10	9
1899.....	66.9	96	34	6.07	7.01	5.89	5.31	0	2	10	13	8
1900.....	66.3	97	29	3.63	3.80	3.00	4.09	0	10	14	11	6
1901.....	63.8	98	30	1.47	1.55	1.43	1.42	0	6	15	10	6
1902.....	69.4	98	39	4.82	5.31	5.65	3.51	0	11	13	11	7
1903.....	65.1	92	23	7.05	7.01	8.21	5.93	0	15	9	10	12
1904.....	63.1	95	32	4.74	5.46	5.40	3.35	0	12	13	10	8
1905.....	64.9	94	34	5.33	4.20	6.62	5.17	0	10	12	11	8
1906.....	66.3	98	27	2.45	2.08	3.02	2.25	0	7	15	10	6
1907.....	59.5	91	17	5.61	3.64	5.92	7.27	0.8	10	14	6	11
1908.....	65.1	96	24	6.91	8.16	6.77	5.79	0	12	12	10	9
1909.....	63.3	96	25	5.55	5.19	6.22	5.25	T.	9	15	9	7
1910.....	60.1	94	32	6.38	7.46	7.42	4.25	0	13	11	8	12
1911.....	68.8	101	27	1.46	2.45	1.10	0.84	0	5	19	7	5
1912.....	67.6	97	30	3.80	3.90	3.45	4.05	0	7	18	8	5
1913.....	65.8	101	33	2.79	3.82	3.16	1.40	0	8	16	7	8
1914.....	66.6	98	31	1.49	0.97	2.31	1.20	0	5	17	9	5
1915.....	63.7	97	30	7.72	8.34	8.11	6.70	0	12	12	7	12
1916.....	65.6	96	33	5.47	7.30	5.46	3.64	0	11	15	8	8
1917.....	58.7	91	30	4.28	4.14	5.38	3.32	0	10	15	7	9
1918.....	68.3	100	28	5.50	5.71	4.23	6.57	0	10	16	8	7
1919.....	62.0	93	35	5.74	5.65	5.96	5.61	0	13	10	10	11
1920.....	63.8	97	32	5.01	3.77	5.10	6.15	0	12	9	9	13
1921.....	66.4	102	28	3.68	3.80	3.68	3.55	0	7	17	8	6
1922.....	67.2	97	38	3.07	3.53	3.59	2.09	0	10	14	10	7
1923.....	62.7	97	25	4.68	2.45	4.40	7.18	T.	12	11	10	10
1924.....	58.6	96	31	4.71	3.18	5.13	5.83	0	10	13	8	10
1925.....	61.2	98	24	2.10	2.32	2.39	1.60	0	7	14	9	8
1926.....	67.0	100	29	2.78	2.42	3.34	2.58	0	7	16	9	6
1927.....	64.6	94	34	6.95	4.55	6.77	9.54	0	12	11	10	10
1928.....	65.8	95	29	2.87	2.05	3.16	3.41	0	8	16	9	6
1929.....	61.7	95	28	7.76	5.30	9.66	8.31	0.3	13	9	10	12
1930.....	64.7	95	33	3.33	3.22	3.73	2.98	0	9	16	8	7
1931.....	61.0	96	29	4.50	4.84	4.64	4.03	0	10	15	6	10
1932.....	66.1	98	31	1.80	2.44	2.03	0.93	0	6	18	9	4
1933.....	65.9	96	35	7.75	6.44	8.07	8.74	0	13	11	9	11
1934.....	69.0	110	31	1.93	1.82	2.42	1.56	0	5	21	7	3
1935.....	60.3	92	32	8.46	9.73	7.99	7.66	0	17	6	8	17
1936.....	63.8	95	32	2.52	3.07	2.95	1.54	0	7	17	10	4
1937.....	66.2	98	34	3.86	3.97	4.36	3.25	0	9	13	11	7
1938.....	65.0	94	32	6.13	5.32	7.75	5.31	0	13	9	12	10
Period.....	64.4	110	17	4.78	4.70	5.17	4.47	T.	10	14	9	8

National University Survey  
Library



## Climatological Data for May 1938

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observers	
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Length of record, years	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelted	With precip., of inch or more	Clear	Partly cloudy			Cloudy
Northern Division																					
Bethany	Harrison	916	43	62.2	- 0.3	86	18	37	8†	28	45	4.39	+0.22	1.18	0	8	14	10	7	nw.	A. S. Cumming
Brunswick	Chariton	652	67	63.6	- 0.6	87	18†	39	13	28	59	5.72	+1.11	1.10	0	15	9	11	11	se.	O. K. Benecke
Canton, Lock & Dam 20	Lewis	488	0	62.9	.....	85	20	39	14	32	8	4.68	.....	0.98	0	11	6	13	12	s.	Lockmaster
Chillicothe	Livingston	779	29	64.2	+ 1.3	88	31	39	8	32	32	3.67	-0.42	1.04	0	16	14	10	7	sw.	Wm. J. Olenhouse
Clifton Hill	Randolph	731	39	63.4	+ 0.2	89	18	38	12†	29	29	6.99	+2.59	2.14	0	16	8	15	8	sw.	Dr. A. J. Bradsher
Columbia	Boone	740	48	64.6	+ 0.3	88	18	41	12	26	48	7.14	+2.68	2.00	0	15	5	15	11	s.	U. S. Weather Bureau
Conception	Nodaway	980	49	63.2	+ 1.1	85	18†	35	8	31	54	5.88	+1.82	1.97	0	13	5	20	6	nw.	Fr. Adelhelm Hess
Edgerton	Platte	856	18	63.7	+ 0.7	87	31	38	8†	36	27	5.78	+1.54	1.46	0	16	13	2	16	e.	Fred L. Stiff
Elsberry	Lincoln	449	7	61.0	.....	89	30	35	13	33	7	3.04	.....	0.86	0	9	7	20	4	sw.	Ray E. Mills
Fayette	Howard	680	58	64.4	+ 0.6	88	18	39	12†	25	55	7.07	+2.75	2.00	0	14	10	15	6	sw.	Morrison Observatory
Fulton	Callaway	818	50	64.8	+ 0.2	88	18	41	12†	29	46	5.51	+0.91	1.31	0	16	12	10	9	se.	Clyde C. Herring
Gorin	Scotland	700	.....	.....	.....	.....	.....	.....	.....	.....	51	5.88	+1.31	1.86	0	10	13	14	4	se.	W. L. Harker
Grant City	Worth	1,134	34	62.4	+ 0.4	87	18	36	8	40	46	5.01	+0.78	1.89	0	11	1	19	11	sw.	Howard Rybolt
Hannibal	Marion	759	46	63.5	- 0.1	87	18	40	12†	25	54	5.86	+1.50	1.12	0	12	2	12	17	sw.	Hannibal Water Dept.
Kansas City	Jackson	741	49	65.2	+ 0.4	88	31	39	8	32	49	7.64	+2.99	2.03	0	16	5	9	17	sw.	U. S. Weather Bureau
Kansas City University	Jackson	908	0	64.8	.....	88	31	38	8	30	0	8.30	.....	2.32	0	15	4	15	12	sw.	University of Kansas City
Kidder	Caldwell	1,020	46	62.7	+ 0.1	85	18†	37	8	27	50	3.61	-1.04	0.77	0	19	7	12	12	nw.	Mrs. Geraldine Terry
King City	Gentry	1,095	.....	.....	.....	.....	.....	.....	.....	.....	12	4.04	-0.17	1.31	0	11	0	30	1	sw.	John M. Martin
Kirksville	Adair	969	49	63.0	+ 0.7	86	18	38	13	31	56	3.72	-1.61	1.16	0	11	4	18	9	nw.	Charles Noble
Lawson	Ray	1,050	0	63.3	.....	85	31	37	8	29	0	7.51	.....	1.65	0	18	3	15	13	se.	Elmer E. Lamb
Linneus	Linn	816	.....	.....	.....	.....	.....	.....	.....	.....	6	3.22	.....	0.86	0	11	11	11	9	sw.	H. D. Taggart
Louisiana	Pike	469	44	62.6	+ 1.1	86	18	32	13	38	57	5.33	+0.63	1.75	0	12	6	20	5	w.	Stark Bro's Nurseries
Macon	Macon	875	39	63.3	- 0.2	88	18	37	13	30	45	4.58	-0.01	1.11	0	11	5	18	8	sw.	Mrs. W. C. Brown
Maryville	Nodaway	1,169	48	62.4	+ 1.1	86	2†	35	8	30	44	6.33	+1.68	1.99	0	15	4	8	19	nw.	R. B. Montgomery
Mexico	Audrain	800	49	63.8	- 0.2	90	18	39	12†	30	60	6.49	+1.89	1.75	0	14	...	...	...	w.	Mrs. Abbie Snoddy
Moberly	Randolph	875	1	63.2	.....	89	18	35	13	32	1	6.03	.....	2.35	0	13	11	10	10	w.	McCormick Hospital
Oregon	Holt	1,048	82	63.2	+ 0.0	88	18†	35	8	31	82	7.67	+3.14	3.35	0	14	9	14	8	se.	Miss Mina Wright
St. Charles	St. Charles	520	50	66.6	+ 3.5	93	20	41	13	31	60	4.61	+0.33	1.30	0	13	13	11	7	sw.	Martin L. Comann
St. Joseph	Buchanan	957	28	63.7	- 0.5	88	18	37	7	26	66	4.70	+0.00	1.63	0	18	4	13	14	s.	U. S. Weather Bureau
Steffenville	Lewis	650	40	63.0	- 0.8	88	18	39	13	28	45	4.78	+0.21	1.06	0	11	4	22	1	se.	Frank Hall
Tarkio	Atchison	916	35	62.0	- 0.6	87	18	35	8	31	44	8.09	+3.55	2.00	0	16	2	14	15	se.	Albert Volker
Trenton	Grundy	822	42	64.3	+ 0.8	89	18	38	8	31	43	2.58	-2.12	0.72	0	12	6	22	3	se.	W. H. Estes
Unionville	Putnam	1,062	45	63.2	+ 1.1	87	2†	38	8	30	45	4.78	-2.47	0.85	0	8	7	17	...	sw.	John H. Schick
Warrenton	Warren	816	66	64.0	- 0.9	86	2†	40	12	27	48	4.32	-0.08	0.78	0	14	3	18	10	se.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.	674	66	63.2	- 0.6	86	18	40	13	26	66	4.24	+0.31	1.01	0	16	4	6	21	sw.	U. S. Weather Bureau
Division means and extremes																					
Southeastern Division																					
Appleton City	St. Clair	813	43	64.6	- 0.4	87	1†	39	8	31	46	10.04	+5.24	2.49	0	11	12	6	13	sw.	Rolla Brown
Bolivar	Polk	1,071	35	66.2	+ 1.4	86	20†	39	8	29	43	6.14	+0.79	2.51	0	14	8	18	5	sw.	Southwest Baptist College
Boonville	Cooper	650	0	65.0	.....	88	18	40	12	25	43	5.24	+0.63	1.76	0	14	8	13	10	se.	Boonville Water Dept.
Clinton	Henry	765	45	65.0	- 0.5	89	31	40	8	30	51	8.79	+3.96	2.16	0	12	...	...	...	sw.	U. S. Weather Bureau
Dean ..	McDonald	1,000	34	66.1	+ 0.4	89	30	33	9	41	39	12.21	+6.46	2.85	0	14	...	...	...	sw.	E. S. Taylor
Eldon	Miller	934	43	64.0	- 0.2	90	31	41	8†	30	39	7.28	+2.98	1.75	0	16	7	14	10	n.	E. H. Shepherd
Garber	Taney	950	4	66.0	.....	90	20†	35	9	39	4	8.29	.....	1.93	0	13	6	10	15	se.	William H. Durham
Harrisonville	Cass	904	60	62.4	- 1.4	86	31	37	8	30	63	10.21	+5.78	3.86	0	16	6	9	19	sw.	John H. Patterson
Jefferson City	Cole	557	48	62.6	- 2.1	86	20	40	8	30	56	7.28	+2.87	1.30	0	18	8	9	14	s.	Mrs. Frank Kliegel
Lakeside	Miller	595	7	65.5	.....	89	31	43	8	33	7	7.16	.....	1.62	0	16	...	...	...	sw.	W. S. Frame
Lamar	Barton	980	50	66.0	+ 0.4	87	31	40	8	34	57	7.45	+2.19	2.55	0	14	10	11	10	sw.	Jesse A. Mann
Lebanon	Laclede	1,265	50	63.8	- 1.1	86	31	38	8	29	51	6.50	+1.29	1.48	0	10	5	15	11	sw.	Mrs. Rosa E. Montelius
Lexington	Lafayette	688	53	64.8	+ 0.4	89	31	40	8	28	54	7.66	+2.70	1.80	0	18	4	22	5	s.	Miss Carrie Loomis
Lockwood	Dade	1,078	32	65.8	+ 1.4	86	31	39	8	31	42	7.29	+1.97	2.25	0	14	8	21	2	sw.	Hubert A. Nieman
Marshall	Saline	779	51	64.6	+ 0.4	87	18	40	8†	28	48	8.53	+3.92	8.82	0	11	14	15	2	sw.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	37	64.0	+ 0.2	86	20	39	8	32	41	8.37	+8.91	1.90	0	12	14	9	8	s.	Mo. Fruit Exp. Station
Mount Vernon	Lawrence	1,174	26	65.8	- 0.0	86	30	39	8	30	38	8.21	+2.70	3.10	0	10	6	22	3	sw.	G. H. Boswell
Neosho	Newton	1,011	51	66.6	+ 0.6	90	30	37	9	37	55	7.58	+2.02	2.81	0	15	12	13	6	sw.	U. S. Fisheries Station
Nevada	Vernon	862	45	67.0	+ 2.5	90	1	40	8	32	46	6.93	+2.00	1.10	0	12	8	11	12	sw.	T. J. Kaupp
Sedalia	Pettis	910	25	65.4	+ 0.1	89	28†	39	8	36	27	8.29	+3.75	2.27	0	13	16	7	8	s.	Mrs. Laura S. Trader
Seligman	Barry	1,542	37	65.2	+ 0.7	86	30	38	8	32	35	8.92	+3.48	3.70	0	14	7	18	6	w.	Floyd E. Fawer
Seymour (near)	Webster	1,642	32	63.6†	+ 0.1	85	20	36	9	32	32	8.16	+3.33	2.37	0	12	13	10	8	se.	A. L. Hailey
Springfield	Greene	1,301	50	64.7	+ 0.2	85	20	38	8	25	50	6.46	+1.27	2.21	0	16	7	11	13	s.	U. S. Weather Bureau
Versailles	Morgan	1,037	11	64.3	- 1.3	87	18†	40	8	28	14	7.26	+2.56	1.72	0	14	9	8	14	sw.	I. M. Wilson
Warrensburg	Johnson	878	51	65.0	- 0.0	88	31	39	8	29	58	8.61	+3.89	3.32	0	12	11	8	12	sw.	E. A. Markey
Warsaw	Benton	687	37	66.1	+ 0.6	89	31	39	8	33	43	7.52	+2.52	1.33	0	18	10	11	9	se.	Everett Martin
Division means and extremes																					
Southeastern Division																					
Advance	Stoddard	355	1	67.4	.....	90	20†	41	9	33	1	4.58	.....	1.35	0	14	...	...	...	sw.	U. S. Weather Bureau
Arcadia	Iron	926	57	64.0	- 0.1	88	20	40	10	33	60	5.30	+1.06	1.09	0	13	9	12	10	s.	Arcadia College
Birch Tree (near)	Shannon	1,000	43	65.9	+ 0.9	8															



Daily Precipitation for May 1938

Stations	Drainage-basins	Day of month																															Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Northern Division																																		
Amity	Grand		.01		.12	.91	.05	.23	.06	T.			.92	.02	.17		.07	.16		.75	.05	.25	T.	.10		.01	.06	T.	T.				3.94	
Bethany	do			.69											.19			.23		1.18		.14					.64				.89	4.39		
Bowling Green	Mississippi				.83	.03	.55	.07						.05			.17	.03		.10	.35		.50	.35	.55					.07			3.65	
Brinswick	Grand	.14	.06			.06	.16	.74					.57	.25	.03		.04	T.		.60	.15	.14	.68	1.10	.46								5.72	
Canton, Lock No. 20	Mississippi				.98		.80							.23			.11		.84		T.	.25	.37	.32		.31	.03	.44					4.68	
Chillicothe	Grand	.02			.69	.03	.48	.09					.13	.03			.02	.03		.62	.12	.04	.03	.24				.01	.19				3.67	
Clifton Hill	Chariton	.18		.15	.05		.62	.05					.24	.04			.02	.01		.53		.48	.05	2.14		.03		.28				2.12	6.99	
Columbia	Missouri			.15	.37	.04	1.24	T.	.01			.81	.74	.02	T.		.15	T.	.07	.28		.61	.14	1.86		T.	.03					7.14		
Conception	do	.08	.97	.31	T.	.42	T.						.45		.36		.38	T.	.42	T.	.06	.05				.07						1.17	5.88	
Edgerton	Missouri	.04	.59	.34	.08	.13	.01	.14				.05	1.38	.01	.11		.06	.03	.05	1.41	.01	1.05	T.	.35		.08							3.20	
Edina	Mississippi			.54		.05	.32							.18			.04		.04	.05	1.41	.01	1.05	T.	.35		.08						3.04	
Elber	do			.54		.05	.32							.18			.04		.04	.05	1.41	.01	1.05	T.	.35		.08						6.20	
Farber	do			.54		.05	.32							.18			.04		.04	.05	1.41	.01	1.05	T.	.35		.08						7.07	
Fayette	Missouri	.31	.33	.22	T.	.82	T.			.08		.84	T.				.01	.29		.18		.78	.02	1.98		.04		T.	.16			1.30	5.51	
Fulton	do			.88	.07	.31	.03					.50	.27	.04	T.		.01	.29		.18		.78	.02	1.98		.04		T.	.16				3.54	
Gallatin	Grand			.88	.07	.31	.03					.50	.27	.04	T.		.01	.29		.18		.78	.02	1.98		.04		T.	.16				5.88	
Gorin	Mississippi		.76			.31	T.					.20		.20			.16		.63		.60	.17	.35	.32	.20		.10	T.					5.01	
Grant City	Grand			.88	.07	.31	.03					.50	.27	.04	T.		.01	.29		.18		.78	.02	1.98		.04		T.	.16				5.85	
Hannibal	Mississippi		.76			.31	T.					.20		.20			.16		.63		.60	.17	.35	.32	.20		.10	T.					5.88	
Hermann	Missouri			.93	T.	.82	.12	.04						.25			.60	.15	.32	T.	.05	T.				.05	.09	1.03				1.04	5.64	
Kahoka	Mississippi			.93	T.	.82	.12	.04						.25			.60	.15	.32	T.	.05	T.				.05	.09	1.03					5.46	
Kansas City	Missouri	.03	T.	.52	.12	.57	.02	T.				.27	1.53	T.			.35	.12	.38		.07	.78	1.25	.04	.98	.13	.91						7.64	
Kansas City University	do	.01	.63	.07	.19	.50	T.					.25	1.18	.01	T.		.05	.07	.62	1.70		1.65	.02	1.35		T.							8.30	
Kidder	Grand	.04		.01	.77	.04	.24	.05	.04			.58	.01	.11			.06	.11		.77	.21	.29	.05	.20		.01	.02						3.61	
King City	Missouri		1.31	.21		.23	.10	.03				.58		.19	.02	.05	.43	.03	.40		.21	T.											4.04	
Kirksville	Mississippi		.71	.45		.50	.19							.18			.02		.02		1.16		.16			.31							3.72	
LaBelle	do		.58	.31	.12	.75						.06	1.65	.07	.11		.13		.93	.32		.29	.26			.37		.98					5.29	
Lawson	Missouri	.03	T.	.58	.31	.12	.75					.06	1.65	.07	.11		.13		.93	.32		.29	.26			.37		.98					7.51	
Linneus	Grand	.04		.62	T.	.38	.06	.03				T.		.04			.03	.22	1.25		1.53	.05	.64		.02		.02						3.22	
Louisiana	Mississippi		.93	.07	.05	.60								.10			.20	.62	.28		.35		1.75			.08	.30						5.33	
Lucerne	Grand			.77	.19	.13								.19			.30	.05	1.25	.04		.11				.17	.02	.05					3.27	
Macou	Chariton			.11	T.	.51	.03							.08			.02		.02		.44	.04		.93	.71	.41		.30	T.				4.58	
Madison	Mississippi	.06		.11	.09	.86	.06					.04		.02			.02		.02		.44	.04		.93	.71	.41		.30	T.				4.86	
Maryville	Missouri		T. 1.99	.21	T.	.45		.19				.46	.07	.18			.03	.68	.30	.45		.05	.05		.04	T.							1.18	
Memphis	Mississippi			.48		.23								.47	T.		.12		.97				.15	.12			.93		.49				3.96	
Mexico	do			.64	.15	1.34							.05	.28	T.		.08		.01		.48		.45	1.75			.62	.85	.08				6.49	
Milau	Grand	.02		.09		.42	.08						.10	.02			.20		.60			.22					.30						3.13	
Moberly	Mississippi	.20		.55	.10	.04	.70	.04					.10	.02					.10		.53		2.35				.65	.65					6.03	
Monroe City	do		.79			1.10								T.			.24		.45			.79		1.76				.12	.21				6.01	
Oregon	Missouri		3.35	.28		.43							.75		.02		.04		.45			.88	.90	.11	.04		.10						7.07	
Palmyra	Mississippi			.79	T.	.97	.08							.11			.29		T.		.88	.90	.11	.04			.07						25	
Paris	do		.05		.65	.07	.12							.05			.03		.05								.13	.56	.30				6.52	
Perry	do			.87		.35								.05			.03		.05									.05					6.87	
Philadelphia	do			.46		1.30								.05			.03		.05									.05					5.49	
St. Charles	Missouri			.87		.35								.05			.03		.05									.05					6.68	
St. Joseph	do			.46		1.30								.05			.03		.05									.05					4.61	
Saverton, Lock No. 22	Mississippi		T. 3.1	1.34	T.	.13	.01	.02				.27	.78	.16		.01	.08		.35	.06	.68	T.	.22	.05	.03	T.	.10	T.					10	4.70
Shelbina	do				.53	.53								.13			.06		.06		.02	.57	.10	.26	2.03	.62		.12		1.26			7.23	
Shelbyville	do				.40	.80								.10			.05		.05								.41		1.40				5.32	
Steffenville	do			.42		.71	.06							.09			.07		.27		1.42		1.37				.53		1.90				6.84	
Tarkio	do		.48			.78								.09			.20		.02		.27		1.42				.53		1.90				4.78	
Trenton	Missouri		.05	2.00	.30	.05	.84		.18				.20	.40			.96		.03	.45		1.06		.84			.08	.50	.30	.30			8.09	
Troy	Grand		.72		.23	.08	.04						.11						.15							1.60	.10	.15				.63	2.58	
Unionville	Mississippi			.56	.09	.36	.45						.05	.08			.21		.01															



## Daily Precipitation for May 1938—Continued from preceding page

Stations	Drainage-basins	Day of month																															Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Southeastern Div.—Continued																																		
Birch Tree (near).....	Black.....				.18			.45						.48			.58	.38			.37	T.			1.78			.16	.06					4.44
Bragg City (near).....	St. Francis.....	T.							.03	T.			.40	T.	.85			.09	.23	.09		.52	.03	.42	.23							.75		3.02
Campbell.....	do.....			.02									.48	.43	T.																.09		2.03	
Cape Girardeau.....	Mississippi.....							T.	.58				.56	.42	.01			.04	.22			.17			.89	.55		.05	.08	.06			3.63	
Caruthersville.....	do.....				.41								.25	.10	.73						1.00			.07	.40			.14	.13	.75			3.98	
Centerville.....	Black.....			.15		.45	.15					.07	.77	.04			.20	.63		.25	T.	.27	1.68	.46			.26	.02	.02				5.42	
Crystal City.....	Mississippi.....			.20		.63	.42						.76				.28	.53		.18				2.11	.42		.10	.51	.02				6.16	
Cuba.....	Meramec.....			.57		1.15							.43	1.02						.75		.45	.46		1.08	.33		.45					6.69	
Dexter.....	St. Francis.....							T.					.10				.23	.25		.09			.82	.38					.34				2.21	
Doniphan.....	Black.....	.07									.02	.53	.26	.02		.08	.29	.05		.26	.13	.82	.40					.18	.12				3.14	
Farmington.....	St. Francis.....			.37			2.12				.27	.83				.27	.33	.01	.18	.66	.07	.85	1.46	.08		.08	.25	.03	.02		.26			7.54
Fisk.....	do.....										T.	.11	.23	.21	T.	.03	.17	.31	T.	T.	.29	.14	.39	.41			T.		.33				2.62	
Fredericktown.....	do.....			.09			.88	T.				.09	.74	.06	.18					.30			.52	1.19	.40				.36	.10			5.11	
Goodland.....	Black.....		.07			1.63					.08	1.00	.23			.27	.86	.05	.17			2.10	1.66				.02	.46					8.54	
Greenville.....	St. Francis.....		.12			.98					T.	.45	.30			.19	.16					T.	.36	.51			.19	T.		1.12			4.09	
Jackson.....	Mississippi.....			.54		1.04					.07	.69	.09			.08	.26	.09		.21		1.19	1.19			.01	.02		.35				5.83	
Jerome.....	Gasconade.....			.61		.90	.22					.35	1.53	.10			.85	.15				.30	.50	1.00	1.67	T.	1.20	.20	1.20				10.80	
Koshkonnong.....	Black.....			.06		.13					.03	.25	1.25			.08	.17			.40	.09		1.48					1.20	.21				5.35	
Leeper.....	do.....			.10		.30						.06	.30	.25			.27	.17		.29			.68	.85	T.			.17	.04	.20	.22		3.90	
Licking (near).....	Gasconade.....			.50		1.65						.63	.70			.44	.39			.12			.97	2.07				.10					7.47	
Marble Hill.....	Mississippi.....			.20	.40	.75						.65	.20			.05	.29	.15			.20			2.01	.05								6.45	
Meramec Park.....	Meramec.....					1.16		.80				.41										.33	1.35	1.02	.80			.05					7.09	
Morehouse.....	Mississippi.....			T.							.04	.37	.18			.19	.32	.07		.13	T.	.89	.30			.01	T.		.38				2.88	
New Madrid.....	do.....	T.					.14		.01	T.		.21	.77	.26	.02		.07	.66				.03	.10	.69	.02		T.	.04		.44	T.		3.46	
Owensville.....	Gasconade.....			.46		.55	T.					.15	.86				.38	.10					1.30	.50	.23		.20						4.98	
Pacific.....	Meramec.....			1.28		.25			.50			.35	.69	.05			.42					.30	1.04	.68	.38		.50						6.15	
Panna.....	St. Francis.....											.30	.36	.23										.58					.05	.55	.05		2.92	
Poplar Bluff.....	Black.....				T.			T.				.45	.23	.17			.26	.67		.17		1.22	.82				.02						4.49	
Richwoods.....	Meramec.....			.20							.50	.10	.62				.46	.30		.23		1.10	1.19	1.02			.15						8.36	
Rolla.....	do.....		.24			T.	1.13	T.			.11	.45	.11	.01			.72	.20		.31		.18	.84	1.69		T.		.41	T.				7.40	
St. Louis.....	Mississippi.....		.34	T.	T.	1.02					.05	T.	.15				.12	.13		.27		.13	.86	2.13				.42	.50				5.97	
St. Louis Airport.....	Missouri.....		.37	T.		.93	T.			T.		.02	.01	T.			.18	.05		.10		.19	.77	1.37			T.	.28	T.				4.27	
St. Louis University.....	Mississippi.....			.36		.96						.08	T.	T.			.13	.16		.20		.16	.83	1.92				.25	.19				5.24	
Salem.....	Meramec.....			.51		.08	1.51	.09				.14	.94	.09			.30	.45		.10			.49	1.95	.50	T.		.31	.27				7.68	
Sikeston.....	Mississippi.....			.02									.48	.18			.16	.52		.16				.65				.20	.06	.64			3.07	
Union.....	Meramec.....			1.31		.70						.80		.01			.22	.19		.33			.09	1.10	1.50		.58	.26	1.04				8.13	
Valley Park.....	do.....			.21			T.	.85				.34	.51				.26	.14		.30		.09	T.	.80	.75	.58			T.				4.14	
Van Buren.....	Black.....											.34	.51				.22	.12		.30			.15	1.24			.51	T.	.02	.06	.15		3.66	
West Plains.....	do.....	.04		.15			T.	.15				.53	1.14				.22	.21		T.	.64		.01	.41	1.39			T.	.22	.07	T.		5.18	
Williamsville.....	do.....					.22						.12	.18	.35			.23	.15		.48			.79	.60	.08			.01	.04	.28	.02		3.65	
Willow Sprgs. (near).....	White.....			.91		1.43						.63	.73	.02			.52	.24	.36		.50			.37	2.82			.24	.03	.28	.04		8.62	
Zalma.....	Mississippi.....					1.00				T.		.76	.09				.35	.11				.31		1.52				.03		.33	T.	T.	4.50	
Cairo, Ill.***	do.....			.01			.21			.01		T.	.43	.09	T.		.04	.37	.04	.17	.01	T.	.19	.33			.02	T.	.61	.18			2.71	

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. †† Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. T. Trace, or less than 0.01 inch.  
 \*\*\* Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. \*\* Precipitation in the next following measurement; separate dates of fall not recorded. • Precipitation is for 24-hour period, midnight to midnight † Estimated. ‡ Partially estimated. ††† Incomplete.

**Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for May 1938**  
 (See precipitation data in table on preceding page)

Station	Data	Day of month																															Monthly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Lakeside..... (Osage Dam)	Evaporation.....	.226	.300	.256	.308	.301	.223	.....	.199	.174	.263	.197	.036	.018	.005	.244	.217	.054	.052	.270	.189	.309	.238	.014	.102	.203	.160	.168	.159	.240	.199	.263	5.773
	Mean temperature.....	70	76	74	70	62	64	65	53	56	58	57	50	52	58	62	61	68	74	72	74	69	64	64	60	64	70	70	72	71	72	78	65.5
	Wind movement.....	35	63	59	76	169	75	53	93	64	58	33	88	51	63	51	40	68	45	54	48	35	56	26	63	26	42	29	36	28	25	28	1,630

Observations taken at 7:30 a. m. For description see April 1932 report.  
 \*\*\* Evaporation included in next measurement.

*Continued from page 25*

windstorm resulted in minor injuries to four persons, broke plate glass windows and damaged trees. Damage to window glass estimated at \$475. On the 30th heavy damage estimated at several thousand dollars was done to property and crops at Carthage and vicinity by the wind. One manufacturer estimated damage to his plant and contents at \$5,000.

#### TORNADOES

Three separate storms, apparently small tornadoes, occurred on the 4th in central and north-central portions of the State resulting in much property damage but no fatalities or injuries.

A small twister struck Warsaw, Benton County, about 11 a. m. of the 4th, doing damage to property estimated at

between \$2,000 and \$3,000. The storm was accompanied by rain and hail.

During the forenoon a rotary wind struck east of Cameron, in Caldwell County, the same day, damaging buildings, roofs, outbuildings, and trees to an estimated amount of \$1,000.

About noon of the 4th a wind, reported in press reports as a tornado, struck southwestern Livingston County, near Ludlow, and moved northeastward to the vicinity of Chula in the north-eastern corner of the county. Buildings, roofs, and trees were damaged and outbuildings were wrecked along the path of the storm. Damage to property estimated at \$10,000.

#### ERRATA

April 1938, page 19: Percentage of sunshine at Columbia should be 63; page 20, days .01 inch or more precipitation at Gorin should be 11; page 23, maximum temperature on 31st at Chillicothe should be 80 and mean maximum should be 64.5.



Daily Temperatures for May 1938

Stations	Day of month																																Mean	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
Northern Division																																		
Bethany.....	Maximum...	81	82	81	70	67	68	60	57	63	70	68	61	56	68	72	65	79	86	78	79	71	66	65	61	73	81	75	77	80	80	85	71.8	
Bethany.....	Minimum...	56	67	70	56	48	40	52	37	43	42	46	45	37	47	46	55	58	63	63	63	53	45	56	39	55	65	62	54	53	57	62	52.7	
Brunswick §§	Maximum...	84	81	81	77	70	71	68	61	67	72	70	57	61	68	75	66	79	87	79	83	70	71	66	71	74	82	80	79	82	85	87	74.3	
Brunswick §§	Minimum...	57	58	56	66	50	47	47	41	41	44	45	41	39	44	47	48	58	63	64	64	62	54	54	47	47	57	62	57	59	60	62	52.9	
Canton, Lock No. 20	Maximum...	74	81	83	71	65	71	64	61	61	68	60	56	60	66	71	66	79	84	81	85	77	76	68	65	73	83	75	78	78	83	81	72.4	
Canton, Lock No. 20	Minimum...	54	63	64	61	57	45	57	43	47	45	47	42	41	29	51	46	57	62	64	63	58	51	59	43	55	56	60	46	58	59	63	53.4	
Chillicothe §§	Maximum...	83	83	83	75	70	67	67	62	66	74	69	60	64	69	77	69	80	86	79	83	70	71	66	71	74	81	80	79	82	84	88	74.6	
Chillicothe §§	Minimum...	56	66	67	67	49	43	50	39	42	42	46	40	40	50	47	58	59	68	62	62	56	56	56	41	53	57	63	55	56	59	65	53.9	
Clifton Hill	Maximum...	75	81	79	79	67	68	62	63	62	72	68	61	53	68	75	69	78	89	81	79	79	67	64	67	73	83	77	78	78	85	83	73.0	
Clifton Hill	Minimum...	55	65	65	66	49	47	52	39	47	43	48	38	38	48	46	56	56	68	66	61	65	57	52	58	43	52	58	61	56	58	59	64	53.9
Columbia	Maximum...	83	82	84	74	71	72	66	60	67	70	69	54	55	68	75	63	75	88	83	83	72	72	65	70	77	81	76	80	81	84	87	73.8	
Columbia	Minimum...	53	69	66	53	52	50	48	42	48	45	50	41	46	49	50	57	60	66	65	65	59	57	52	44	54	62	63	59	63	63	65	55.5	
Conception.....	Maximum...	81	84	81	77	64	63	54	61	64	70	70	63	64	67	76	71	78	85	81	81	75	73	65	69	76	83	75	83	85	83	85	73.2	
Conception.....	Minimum...	56	66	59	56	46	44	42	35	52	54	49	41	40	49	45	57	57	69	61	64	54	47	55	44	54	55	59	52	63	58	63	53.1	
Edgerton.....	Maximum...	85	85	84	76	70	67	65	64	68	74	71	61	59	67	75	64	78	86	77	81	70	68	66	69	75	83	80	83	83	83	87	74.3	
Edgerton.....	Minimum...	60	67	69	58	49	42	45	38	43	38	46	42	46	50	41	57	61	69	62	66	55	50	55	38	55	54	60	48	58	56	67	53.1	
Elsberry.....	Maximum...	78	88	77	80	68	72	64	61	65	71	67	60	62	69	74	73	74	88	85	85	79	73	70	69	78	81	73	81	82	89	86	71.9	
Elsberry.....	Minimum...	49	59	61	59	53	46	51	49	46	43	49	42	35	49	54	50	56	62	65	64	56	59	59	44	49	56	57	58	54	56	58	53.2	
Fayette.....	Maximum...	80	81	82	76	69	70	68	63	65	70	70	61	57	66	74	67	76	88	81	81	75	73	65	69	76	83	79	79	80	84	85	74.0	
Fayette.....	Minimum...	57	65	64	61	50	47	42	36	46	45	50	39	50	49	57	59	66	63	64	57	55	57	45	53	60	61	58	59	61	65	54.8		
Fulton§§	Maximum...	83	84	85	78	73	74	64	61	69	73	70	54	59	67	76	65	75	85	83	78	76	74	66	71	78	82	76	81	84	84	87	74.8	
Fulton§§	Minimum...	54	65	65	66	52	49	52	43	42	47	51	41	41	50	50	50	57	65	67	65	60	58	58	46	53	54	59	58	58	60	66	54.9	
Grant City	Maximum...	81	84	81	76	67	63	55	60	63	72	67	61	78	66	73	69	78	87	78	86	67	62	65	68	75	81	76	78	81	82	84	73.0	
Grant City	Minimum...	56	66	69	54	47	39	42	36	44	41	45	45	40	40	47	50	52	56	64	65	66	57	52	58	43	54	57	60	59	61	63	53.9	
Hanulbal	Maximum...	79	84	85	80	68	65	65	60	61	69	63	60	63	67	70	65	79	87	82	83	80	71	69	67	74	78	71	78	78	82	83	73.1	
Hanulbal	Minimum...	51	63	63	58	51	46	51	42	46	45	48	40	40	47	50	52	56	64	65	66	57	52	58	43	54	57	60	59	61	63	53.9		
Kansas City	Maximum...	87	84	83	73	69	67	70	64	67	73	70	55	57	67	78	69	80	85	78	84	68	69	66	71	77	85	80	86	85	83	88	74.8	
Kansas City	Minimum...	66	68	71	50	50	51	40	39	49	48	55	43	48	53	49	58	63	63	62	65	57	54	50	45	60	61	63	54	63	62	67	55.7	
Kansas City Univ.	Maximum...	86	84	82	76	69	68	73	63	67	72	70	62	57	67	76	70	80	85	78	82	77	69	66	71	76	82	79	83	82	82	88	74.9	
Kansas City Univ.	Minimum...	63	65	69	57	48	47	48	38	44	44	51	42	47	52	49	57	62	66	61	65	56	54	55	41	57	58	62	54	61	60	67	54.8	
Kidder	Maximum...	80	80	79	74	66	64	65	60	64	69	69	60	62	64	72	67	77	85	80	79	69	69	64	68	73	80	76	79	81	81	85	72.3	
Kidder	Minimum...	56	65	67	56	48	44	51	37	46	44	50	40	39	50	46	56	59	67	61	62	55	49	55	43	54	56	60	52	58	57	64	53.1	
Kirksville	Maximum...	79	80	80	74	66	70	64	59	59	68	67	62	67	66	73	71	79	86	81	82	78	71	65	67	81	80	76	82	80	83	84	73.2	
Kirksville	Minimum...	53	65	67	56	48	39	50	39	46	43	48	41	38	47	49	52	57	66	63	64	56	48	58	40	52	55	63	54	55	55	70	52.8	
Lawson	Maximum...	81	81	81	73	68	67	67	61	66	72	71	59	60	65	73	65	79	84	77	81	71	69	65	69	75	81	78	82	81	82	85	73.2	
Lawson	Minimum...	57	65	67	56	48	46	45	37	45	43	51	40	43	49	46	56	60	66	60	64	55	51	55	43	55	57	60	53	58	57	66	53.4	
Louisiana	Maximum...	75	77	85	78	70	65	70	60	58	70	70	60	70	70	70	60	77	86	85	80	75	73	68	67	75	76	79	80	77	80	77	73.0	
Louisiana	Minimum...	42	58	60	60	52	42	40	42	40	45	45	40	32	47	52	45	56	64	67	65	67	52	52	45	50	54	57	57	55	55	57	52.3	
Macou§§	Maximum...	81	82	83	76	70	69	64	60	63	72	64	60	66	68	75	66	81	88	81	83	72	73	68	72	75	82	79	80	81	81	85	74.2	
Macou§§	Minimum...	54	65	65	64	48	43	50	39	40	44	46	43	37	46	46	54	56	61	62	63	58	50	57	42	47	54	59	55	56	58	62	52.4	
Maryville	Maximum...	82	86	83	78	65	61	53	61	65	71	68	62	65	73	69	75	86	78	75	67	63	66	67	75	82	75	80	80	83	81	84	72.4	
Maryville	Minimum...	58																																



## Daily Temperatures for May 1938—Continued from preceding page

Stations	Day of month																															Mean		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
Southwestern Division—Concluded																																		
Neosho.....	Maximum...	87	81	80	77	70	74	74	65	72	72	77	76	65	70	79	76	80	86	85	86	86	81	72	74	78	80	81	85	85	90	86	78.4	
	Minimum...	60	66	63	64	44	42	55	38	37	42	50	50	51	51	42	50	69	68	63	64	61	57	40	49	56	58	62	66	61	66	54.8		
Nevada.....	Maximum...	90	85	81	76	75	73	76	66	74	76	75	64	57	72	80	74	82	87	79	87	81	68	67	75	80	84	83	88	84	88	89	77.9	
	Minimum...	64	64	65	58	46	47	57	40	45	45	57	54	47	51	48	56	62	69	62	65	58	58	56	45	55	59	60	60	60	69	56.2		
Sedalia.....	Maximum...	84	82	83	82	72	71	73	71	69	73	70	63	54	68	75	75	76	88	81	81	79	70	66	72	75	82	80	89	83	85	89	76.2	
	Minimum...	48	67	65	60	48	50	59	39	41	43	50	42	45	49	46	54	60	67	61	63	57	55	56	41	55	61	61	56	60	61	68	54.5	
Seligman.....	Maximum...	84	79	78	75	68	74	71	64	69	69	78	74	65	67	74	75	77	83	80	83	83	72	54	43	63	52	52	56	60	59	63	54.8	
	Minimum...	59	64	62	62	42	42	51	38	44	48	57	53	48	58	46	52	58	66	60	61	63	62	54	43	63	52	52	56	60	59	63	54.8	
Seymour(near).....	Maximum...	...	...	...	76	71	72	67	68	68	71	61	58	60	71	72	70	84	80	85	84	80	68	71	71	77	77	81	80	84	84	84	74.1	
	Minimum...	60	62	66	53	45	46	57	37	36	40	45	48	46	49	42	51	58	65	61	60	62	59	54	41	50	54	60	55	61	58	62	53.0	
Springfield.....	Maximum...	82	81	80	76	68	70	70	58	66	69	73	63	57	67	74	67	74	81	76	85	81	68	66	70	71	76	77	80	80	83	85	73.5	
	Minimum...	63	66	64	53	48	52	45	38	45	47	54	50	49	52	49	54	61	66	60	63	64	61	51	46	55	60	63	62	64	63	66	55.9	
Versailles.....	Maximum...	83	83	84	78	72	70	73	67	66	70	64	50	54	66	73	69	74	87	80	84	78	70	66	70	74	80	78	81	80	82	87	74.0	
	Minimum...	58	65	63	64	50	50	54	40	44	42	46	44	44	50	47	54	60	65	63	64	58	56	58	42	52	59	60	63	62	64	63	66	55.9
Warrensburg.....	Maximum...	83	81	81	77	72	69	73	68	67	72	68	59	53	67	76	77	85	79	78	82	79	71	65	69	73	81	80	83	82	85	88	74.9	
	Minimum...	61	67	66	56	49	47	56	39	44	44	51	42	44	49	47	64	69	62	61	64	56	54	56	42	56	61	62	55	59	59	67	55.1	
Warsaw.....	Maximum...	84	82	83	78	72	72	77	70	70	75	65	61	59	69	78	72	78	88	80	85	77	67	68	76	76	83	81	87	85	85	89	76.5	
	Minimum...	60	66	65	65	49	49	57	39	45	42	51	51	46	50	46	55	61	66	62	63	62	56	61	43	53	59	62	58	59	68	68	55.7	
Southeastern Division																																		
Advance.....	Maximum...	79	84	83	80	75	79	78	73	74	72	75	61	55	72	78	70	68	83	87	90	87	81	81	70	79	84	85	86	81	85	90	78.3	
	Minimum...	54	59	60	60	55	50	60	56	41	44	47	47	49	53	46	55	60	66	66	63	70	65	64	50	48	57	60	59	62	62	62	56.5	
Arcadia §§.....	Maximum...	79	84	81	76	75	71	76	60	72	71	71	50	56	69	75	64	71	82	81	88	78	76	74	70	77	78	79	83	81	80	86	74.7	
	Minimum...	50	57	59	64	53	46	55	46	41	40	44	48	44	46	49	53	51	62	61	63	61	60	60	47	44	52	56	55	60	56	58	53.2	
Birch Tree(near)....	Maximum...	79	82	77	74	74	75	77	72	72	72	72	74	63	66	76	73	64	84	83	85	83	80	75	72	77	80	79	84	83	87	76.7		
	Minimum...	62	64	62	63	53	50	53	44	37	40	43	53	48	53	52	53	59	56	61	64	63	60	44	47	53	56	60	63	64	63	63	56.1	
Campbell.....	Maximum...	81	85	85	81	76	81	80	76	76	73	78	65	59	72	79	75	70	84	88	90	92	79	83	74	81	85	87	88	86	85	93	80.2	
	Minimum...	62	62	60	62	57	50	62	57	41	47	50	51	50	55	51	59	58	62	62	65	69	64	64	51	51	60	62	61	63	64	68	58.2	
Caruthersville §§....	Maximum...	85	88	87	84	78	83	86	75	79	76	82	62	67	76	81	77	74	85	87	88	94	84	82	78	80	87	88	90	86	88	90	82.1	
	Minimum...	61	63	63	63	59	56	56	64	43	43	46	49	50	51	50	50	61	61	67	67	69	65	65	54	53	55	59	62	63	65	66	57.7	
Crystal City §§.....	Maximum...	85	88	86	81	74	73	73	68	71	72	70	54	62	75	76	76	91	87	91	79	77	77	70	79	81	81	83	83	87	87	77.4		
	Minimum...	48	57	62	55	54	55	42	41	48	44	41	51	41	51	42	57	61	69	63	67	59	59	49	49	55	57	56	57	57	57	53.5		
Doniphan.....	Maximum...	85	86	84	80	77	80	82	78	70	76	77	65	60	73	80	72	70	85	87	90	90	79	82	75	79	85	86	87	86	85	92	80.1	
	Minimum...	63	61	59	59	54	55	62	58	38	40	45	51	50	55	44	57	55	61	65	62	68	67	64	45	47	53	62	60	63	65	66	56.6	
Farmington.....	Maximum...	81	85	84	80	73	72	75	65	71	70	72	57	56	69	74	65	70	86	86	89	79	77	76	70	79	81	81	84	83	84	88	76.2	
	Minimum...	51	57	57	61	53	48	56	46	45	44	47	45	43	52	51	54	56	65	66	64	66	59	59	47	49	55	58	58	58	59	60	54.5	
Goodland.....	Maximum...	85	85	81	77	73	74	75	73	70	71	71	65	53	68	75	70	67	85	84	89	89	83	73	77	72	79	79	84	81	84	86	76.8	
	Minimum...	53	55	55	61	52	45	57	44	34	35	39	46	46	51	39	52	55	65	63	63	59	58	59	44	41	49	55	54	59	55	57	51.6	
Greenville.....	Maximum...	76	82	80	76	74	76	79	73	70	70	72	62	55	66	72	70	70	83	82	85	86	76	79	62	78	79	80	83	80	81	85	75.5	
	Minimum...	52	56	55	56	50	43	58	48	35	36	41	45	47	52	41	51	56	66	60	65	62	56	42	42	51	54	55	60	59	58	52.1		
Jackson.....	Maximum...	81	86	85	85	81	75	77	79	73	76	76	62	55	74	77	80	73	84	81	90	90	85	76	76	80	78	83	82	81	84	90	79.2	
	Minimum...	52	62	62	63	55	50	58	52	41	44	46	45	46	52	48	54	58	63	67	63	72	64	62	50	48	59	60	60	62	63	56.2		
Koshkonong.....	Maximum...	79	82	78	75	75	75	70	71	72	73	66	62	69	76	74	69	85	84	87	85	73	77	77	77	77	77	77	77	77	77	77	77.4	
	Minimum...	62	61	61	62	52	62	44	45	49	55	49	48	54	50	56	58	67	64	63	69	62	62	62	62	62	62	62	62	62	62	62	62.1	
Licking(near).....	Maximum...	80	85	80	80	76	77	80	73	73	73	77	60	54	71	77	74	72	84	85	88	85	82	80	72	80	83	84	85	83	84	88	78.2	
	Minimum...	51	60	60	60	54	47	57	40	39	40	43	45	46	52	47	53	57	65	65	61	70	62	63	48	44	56	64	57	60	58	59	54.8	
Poplar Bluff.....	Maximum...	71	84	82	80	70	81	77	73	76	76	76	58	57	73	82	67	70	84	86	85	89	79	81	76	79	88	83	83	80	86	90	78.1	
	Minimum...	61	60	59	63	55	50	61	45	41	4																							



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# CLIMATOLOGICAL DATA

## MISSOURI SECTION

W. J. MOXOM  
ST. LOUIS, MO.

19  
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### GENERAL SUMMARY

The mean temperature for the State was generally below normal. The greatest departure was in the southeastern division where the range was from about normal to 4.2° below normal. The highest temperatures throughout the State occurred on the 24th and ranged from 87° at Seligman in Barry County to 98° at several stations in the northern division. Minimum temperatures ranged from 44° at Licking(near) in Texas County on the 2d to 59° at St. Louis on the 28th.

June was a month of above normal rainfall. During the first half of the month there was considerable crop damage by excessive rains in east-central and southeastern portions of the State. The latter half of the month was much more favorable for growing crops. At the close of the month all growing crops were in good to excellent condition.

### TEMPERATURE

The monthly mean temperature for the State, 82 stations reporting, was 72.4°, or 1.2° below normal. The highest monthly mean was 75.4° at Campbell and Caruthersville, and the lowest monthly mean was 69.4° at Greenville. The highest temperature recorded was 98° at Mexico on the 23d and at Conception, Oregon, Tarkio, Trenton, and Unionville on the 24th, and the lowest was 44° at Licking(near) on the 2d. The greatest daily range was 38° at Doniphan on the 14th.

### PRECIPITATION

The average precipitation for the State, 140 stations reporting, was 4.77 inches, or 0.15 inch more than normal. The greatest local monthly amount was 10.05 inches at Crystal City, and the least local monthly amount was 1.52 inches at King City. The greatest amount in any twenty-four hours was 7.84 inches at Crystal City on the 11th. The average number of days with 0.01 inch or more of precipitation was 10.

### MISCELLANEOUS PHENOMENA

Floods.—In Bourbeuse River, 11-13th. In Meramec River, 11-14th. In Mississippi River at Cairo, Ill., May 30-June 3d. In Missouri River at St. Charles and below on 12th.

Fog.—Dense, 4th, 12th, 17th, 18th, 19th, 20th, 21st, 22d, 28th, 29th.

Hail.—Light, on 1st at Moberly, 6th at Lawson, 7th at Kidder, 10th at Lawson, 11th at Jackson, 15th at Springfield.

Moderate, on 10th at Boonville, 14th in northwestern Nodaway County with some damage to wheat and oats; also at Lebanon, but date not given.

Halos.—Solar, 6th, 7th, 10th, 13th, 22d, 23d, 24th, 25th, 29th, 30th; lunar, 18th.

Thunderstorms.—Local, 4th, 5th, 13th, 14th, 17th, 18th, 19th, 22d, 23d, 24th, 25th, 26th, 30th; more or less general, 1st, 3d, 6th, 7th, 9th, 10th, 11th, 15th, 16th.

Windstorms.—1st, 6th, 10th, 11th, 14th, 16th, 25th, with minor damage to trees at Brunswick and Kansas City on the 6th. On the 10th wind damaged trees and electric lines at Union. On the 14th a windstorm struck southwest of Burlington Junction, Nodaway County, and did considerable damage to barns, outbuildings, and trees. On the 25th trees were damaged and wheat blown down at St. Charles.

### EXCESSIVE PRECIPITATION

Unusually heavy rains occurred over the Bourbeuse and Meramec River basins on 10-11th, causing overflow of bottom lands and resulting in much crop loss. Wheat was a total loss and corn had to be replanted. All smaller streams and creeks in the area were out of their banks and flooded lowlands. At Sullivan water was reported about three feet deep in the print.

(Continued on page 34)

### PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind				Relative humidity			Percentage of sunshine
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12 noon	6:30 p. m.	
Columbia.....	29.98	30.28	12	29.67	6	6.8	26	w.	6	82	56	59	66
Kansas City.....	29.96	30.29	12	29.44	6	8.9	34	sw.	6	82	56	58	72
St. Joseph.....	29.96	30.30	12	29.63	6	8.0	28	nw.	14	84	54	52	68
St. Louis.....	30.00	30.32	13	29.71	6	10.2	31	nw.	10	76	52	54	57
Springfield.....	30.00	30.27	12	29.60	6	8.8	25	sw.	11	82	61	63	60
Cairo, Ill.....	30.00	30.29	13	29.77	25	7.6	30	nw.	15	82	58	59	71
Keokuk, Iowa..	29.98	30.29	28	29.70	6	7.3	21	w.	15	78	53	56	76

### COMPARATIVE DATA FOR JUNE

Year	Temperature			Precipitation					Number of days				
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy	
1888.....	72.6	103	36	5.81	5.98	5.96	5.50	0	7	..	..	..	..
1889.....	70.7	100	38	4.66	4.29	4.57	5.13	0	6	..	..	..	..
1890.....	77.2	106	44	2.45	3.14	2.49	1.71	0	6	..	..	..	..
1891.....	73.2	103	46	6.56	5.61	7.99	6.08	0	13	..	..	..	..
1892.....	74.5	100	45	3.09	3.04	3.72	2.52	0	7	..	..	..	..
1893.....	72.6	98	40	4.72	4.92	3.91	5.32	0	9	12	12	11	6
1894.....	74.5	105	35	3.74	4.28	4.92	2.03	0	7	16	11	12	6
1895.....	73.3	100	42	5.87	6.07	6.33	5.20	0	10	12	11	11	6
1896.....	72.5	101	45	3.98	3.32	3.63	5.00	0	9	12	11	11	7
1897.....	73.6	102	38	6.25	6.49	5.74	6.51	0	12	9	14	12	7
1898.....	75.3	100	49	5.92	6.32	6.54	4.90	0	11	13	12	11	5
1899.....	74.3	101	42	3.52	3.71	4.83	3.21	0	9	15	10	12	6
1900.....	73.3	103	44	5.05	3.71	5.06	6.37	0	10	12	12	10	6
1901.....	77.9	106	40	2.02	2.67	1.47	1.92	0	6	18	10	12	6
1902.....	70.9	100	37	6.42	6.64	6.95	5.68	0	12	11	10	12	6
1903.....	67.3	95	36	3.28	2.96	3.78	3.09	0	9	15	9	12	6
1904.....	70.5	93	45	6.68	5.31	8.23	6.51	0	11	12	12	10	6
1905.....	75.2	103	42	3.14	2.84	3.06	3.52	0	7	15	10	12	5
1906.....	72.7	101	40	4.82	3.28	6.62	4.55	0	10	15	9	12	6
1907.....	71.2	97	40	5.47	5.76	6.40	4.24	0	11	14	10	10	6
1908.....	72.3	98	43	6.01	6.92	6.78	4.33	0	11	13	10	12	7
1909.....	73.9	98	48	5.23	5.96	5.78	3.95	0	11	11	13	6	6
1910.....	70.4	99	38	4.11	3.08	4.69	4.57	0	8	16	7	7	7
1911.....	78.9	112	43	1.76	0.93	1.59	2.77	0	6	18	8	4	4
1912.....	69.5	100	42	4.77	3.31	5.39	5.62	0	9	14	8	8	4
1913.....	75.4	107	33	2.55	3.01	2.31	2.32	0	6	18	8	4	4
1914.....	79.3	106	43	2.26	3.11	2.50	1.17	0	5	18	7	5	5
1915.....	70.8	98	38	6.45	7.53	7.24	4.57	0	12	11	10	9	6
1916.....	70.0	100	42	5.86	5.05	6.50	6.04	0	10	14	9	7	7
1917.....	71.0	103	35	3.67	5.72	2.20	3.10	0	8	19	7	4	4
1918.....	77.2	110	48	3.09	3.04	3.20	3.04	0	7	17	8	5	5
1919.....	75.0	104	44	5.58	5.04	6.24	5.47	0	11	14	10	6	6
1920.....	72.7	104	41	2.35	3.09	2.14	1.83	0	6	18	7	5	5
1921.....	76.6	105	44	5.81	4.74	7.74	4.96	0	12	12	10	8	3
1922.....	76.5	108	43	1.61	1.72	1.39	1.72	0	5	19	8	3	3
1923.....	73.5	103	45	5.56	5.30	6.52	4.87	0	11	14	9	7	7
1924.....	72.5	101	38	7.27	8.53	7.70	5.57	0	14	12	12	6	6
1925.....	76.5	103	46	5.99	7.68	4.99	5.31	0	9	15	10	5	5
1926.....	70.9	101	37	3.60	5.02	3.79	1.99	0	8	15	9	6	6
1927.....	70.3	99	41	5.81	5.38	6.77	5.28	0	10	15	7	8	8
1928.....	67.7	91	40	11.25	8.59	11.03	14.12	0	15	8	11	11	11
1929.....	71.3	99	39	5.69	6.57	5.98	4.52	0	10	16	8	6	6
1930.....	72.4	109	36	3.77	5.17	4.63	1.52	0	7	18	8	4	4
1931.....	77.1	107	40	2.75	4.09	1.81	2.35	0	6	19	8	3	3
1932.....	75.2	103	47	4.81	5.53	6.09	2.82	0	10	12	12	6	6
1933.....	78.4	107	38	1.47	2.89	0.92	0.61	0	3	22	6	2	2
1934.....	80.4	108	47	2.82	2.92	2.72	2.83	0	7	17	10	3	3
1935.....	69.6	98	39	8.95	6.73	11.06	9.07	0	15	9	12	9	9
1936.....	76.5	112	40	1.42	1.30	1.38	1.57	0	4	21	6	3	3
1937.....	74.4	105	43	4.93	3.43	5.79	5.56	0	10	14	10	6	6
1938.....	72.4	98	44	4.77	4.20	5.04	5.06	0	10	13	11	6	6
Period.....	73.6	112	33	4.62	4.63	4.88	4.26	0	9	15	9	6	6



## Climatological Data for June 1938

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches				Number of days				Prevailing direction of wind	Observers		
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Length of record, years	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelted	With precip., .01 inch or more	Clear			Partly cloudy	Cloudy
Northern Division																					
Bethany	Harrison	916	43	71.0	-1.0	96	24	48	27	29	45	3.07	-1.99	1.97	0	8	16	11	3	se.	A. S. Cumming
Brunswick	Chariton	652	57	72.2	-0.8	95	24	55	27	34	59	7.29	+2.18	1.77	0	11	16	5	9	se.	O. K. Benecke
Canton, Lock & Dam 20	Lewis	488	0	70.5	.....	93	24	46	12	35	8	3.89	.....	1.85	0	11	11	11	8	s.	Lockmaster
Chillicothe	Livingston	779	29	72.2	-0.1	96	24	50	27	30	32	4.26	-0.47	0.87	0	10	17	10	3	sw.	Wm. J. Olenhouse
Clifton Hill	Randolph	731	39	70.6	-1.8	95	24	51	5	31	29	5.06	+0.67	1.62	0	12	10	14	6	sw.	Dr. A. J. Bradsher
Columbia	Boone	740	48	72.8	+1.0	94	24	55	25	28	48	8.46	+3.70	2.61	0	13	9	16	5	s.	U. S. Weather Bureau
Conception	Nodaway	980	49	72.5	+0.0	98	24	52	27	30	54	2.03	-2.92	0.83	0	6	13	13	4	se.	Fr. Adelhelm Hess
Edgerton	Platte	856	18	71.8	-0.1	94	24	48	12	31	27	4.41	-0.46	0.90	0	11	18	5	7	s.	Fred L. Stiff
Elsberry	Lincoln	449	7	72.0	.....	95	24	48	5	37	7	4.33	.....	1.82	0	7	14	13	3	sw.	Ray E. Mills
Fayette	Howard	680	58	71.8	-1.0	93	24	54	27	27	55	3.87	-0.70	1.23	0	11	15	11	4	sw.	Morrison Observatory
Fulton	Callaway	818	50	72.9	-0.3	94	24	53	3	30	46	4.03	-0.37	1.42	0	12	15	10	5	w.	Clyde C. Herring
Gorin	Scotland	700	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	se.	W. L. Harker
Grant City	Worth	1,134	34	71.2	+0.4	97	24	49	8	32	46	2.26	-2.74	1.43	0	9	6	17	7	sw.	Howard Rybolt
Hannibal	Marion	759	46	71.6	-0.9	92	23	53	27	26	54	3.82	-0.08	0.76	0	11	7	12	11	sw.	Hannibal Water Dept.
Kansas City	Jackson	741	49	74.0	+0.4	97	24	54	12	28	49	5.22	+0.23	1.17	0	13	5	12	13	sw.	U. S. Weather Bureau
Kansas City University	Jackson	908	0	73.4	.....	94	24	52	12	29	0	5.23	.....	1.52	0	14	5	16	9	s.	University of Kansas City
Kidder	Caldwell	1,020	46	71.2	-0.6	95	24	50	27	27	50	4.38	-0.59	1.20	0	9	17	3	10	se.	Mrs. Geraldine Terry
King City	Gentry	1,095	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	se.	John M. Martin
Kirkville	Adair	969	49	71.1	-0.6	92	24	50	5	31	56	5.20	+0.14	1.35	0	9	12	12	6	s.	Charles Noble
Lawson	Ray	1,070	0	72.0	.....	94	24	51	27	28	0	5.72	.....	1.13	0	10	12	9	9	nw.	Elmer E. Lamb
Linneus	Linn	816	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	se.	H. D. Taggart
Louisiana	Pike	469	44	70.0	-2.1	95	24	48	3	32	57	3.25	-0.98	1.10	0	9	14	12	4	w.	Stark Bro's Nurseries
Macon	Macon	1,875	39	71.2	-1.2	95	23	50	27	30	45	5.47	+0.75	2.55	0	7	14	9	7	w.	Mrs. W. C. Brown
Maryville	Nodaway	1,169	48	71.8	+2.0	97	24	51	7	27	44	2.03	-3.08	1.02	0	9	11	11	8	se.	R. B. Montgomery
Mexico	Audrain	800	49	71.9	-1.3	98	23	52	3	32	60	5.87	+1.13	2.40	0	11	.....	.....	.....	e.	Mrs. Abbie Snoddy
Moberly	Randolph	875	1	70.6	.....	93	24	49	27	33	1	5.14	.....	1.25	0	10	21	5	4	sw.	McCormick Hospital
Oregon	Holt	1,048	82	72.8	+0.6	98	24	51	27	29	82	4.59	-0.78	2.27	0	9	17	12	1	se.	Miss Mina Wright
St. Charles	St. Charles	520	50	74.2	+0.3	95	23	55	3	34	60	5.02	+1.02	2.37	0	9	20	8	2	sw.	Martin L. Comann
St. Joseph	Buchanan	957	28	73.2	-0.5	97	24	53	12	29	66	2.10	-2.85	0.82	0	11	9	13	8	se.	U. S. Weather Bureau
Steffenville	Lewis	650	40	70.9	-1.7	94	23	49	27	30	45	4.67	+0.13	1.50	0	10	14	14	2	e.	Frank Hall
Tarkio	Atchison	916	35	71.5	-0.3	98	24	51	28	31	44	3.51	-1.45	2.25	0	10	11	13	6	se.	Albert Volker
Trenton	Grundy	822	42	72.0	-0.2	98	24	51	27	34	43	2.45	-2.59	0.59	0	9	9	18	3	s.	W. H. Estes
Unionville	Putnam	1,062	45	71.4	+0.1	98	24	49	27	31	45	3.26	-1.93	1.30	0	7	17	4	9	s.	John H. Schick
Warrenton	Warren	816	56	72.1	-1.3	91	23	55	28	27	48	5.37	+1.59	2.43	0	13	6	17	7	sw.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.	574	66	71.2	-1.3	94	24	55	27	26	66	3.70	-0.43	1.14	0	12	6	9	15	sw.	U. S. Weather Bureau
Division means and extremes																					
..... 71.9 -0.5 98 23 46 12 37 4.20 -0.43 4.16 0 10 13 11 6 sw.																					
Southwestern Division																					
Appleton City	St. Clair	813	43	73.1	-1.3	93	24	55	12	31	46	4.58	-0.44	1.20	0	12	17	3	10	sw.	Rolla Brown
Bolivar	Polk	1,071	35	72.9	+0.1	92	24	54	12	27	43	3.36	-1.95	0.88	0	11	13	14	3	sw.	Southwest Baptist College
Boonville	Cooper	650	0	72.6	.....	93	24	55	27	28	61	5.02	-0.03	1.51	0	12	11	14	5	se.	Boonville Water Dept.
Clinton	Henry	765	45	73.2	-0.6	94	24	53	3	30	51	4.49	-0.41	1.24	0	13	.....	.....	.....	.....	U. S. Weather Bureau
Dean H.	McDonald	1,000	34	72.9	+0.2	91	24	52	21	37	39	6.69	+0.76	1.64	0	11	11	16	3	e.	E. S. Taylor
Eldon	Miller	934	43	71.8	-1.2	93	24	54	28	37	39	3.65	-0.39	1.83	0	11	12	9	9	s.	E. H. Shepherd
Garber	Taney	950	4	72.4	.....	95	24	49	3	36	4	5.05	.....	2.50	0	12	9	6	15	e.	William H. Durham
Harrisonville	Cass	904	60	72.8	-0.3	95	24	55	28	28	63	4.66	-0.13	1.87	0	9	6	13	11	sw.	John H. Patterson
Jefferson City	Cole	557	48	70.4	-3.4	89	23	53	28	26	56	4.90	+0.67	2.34	0	12	16	9	5	s.	Mrs. Frank Kliegel
Lakeside	Miller	595	7	73.6	.....	93	24	55	3	30	7	4.06	.....	1.28	.....	12	.....	.....	.....	ne.	W. S. Frame
Lamar	Barton	980	50	73.6	-0.6	94	15	57	27	29	57	5.61	+0.07	1.05	0	9	12	8	10	sw.	Jesse A. Mann
Lebanon	Laclede	1,265	50	70.8	-1.9	90	23	52	12	29	51	2.69	-2.48	0.62	0	11	12	9	9	sw.	Mrs. Rosa E. Montelius
Lexington	Lafayette	683	53	73.8	+0.9	96	24	55	12	29	54	5.83	+1.28	1.30	0	10	16	10	4	se.	Miss Carrie Loomis
Lockwood	Dade	1,078	32	72.9	-0.7	92	24	55	3	29	42	5.32	-0.36	1.30	0	10	18	10	2	sw.	Hubert A. Nieman
Marshall	Saline	779	51	72.7	-0.5	94	24	55	13	27	48	4.70	-0.10	1.46	0	12	19	7	4	s.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	37	71.6	-0.2	91	24	54	8	27	41	4.84	-0.10	1.60	0	11	18	8	4	s.	Mo. Fruit Exp. Station
Mount Vernon	Lawrence	1,174	26	73.1	-0.2	92	24	56	12	28	38	8.58	+3.32	2.95	0	10	5	25	0	sw.	G. H. Boswell
Neosho	Newton	1,011	51	73.3	-0.5	91	24	52	3	33	55	5.90	-0.07	1.71	0	11	21	6	3	sw.	U. S. Fisheries Station
Nevada	Vernon	862	45	74.6	+1.1	95	24	55	12	30	46	5.02	-0.43	1.05	0	10	14	9	7	sw.	T. J. Kaupp
Nedalia	Pettis	910	25	73.2	-1.0	95	24	50	5	35	27	4.97	-0.31	1.38	0	11	22	5	3	sw.	Mrs. Laura S. Trader
Seligman	Barry	1,542	37	71.3	-1.1	87	24	54	2	24	35	5.00	+0.05	1.78	0	10	15	14	1	sw.	Floyd E. Fawer
Seymour (near)	Webster	1,642	32	70.0	-1.7	88	24	48	16	37	32	4.18	-1.16	1.10	0	9	13	11	6	se.	A. L. Halley
Springfield	Greene	1,301	50	72.6	+0.1	90	24	58	2	24	50	5.61	+0.93	3.00	0	13	12	10	8	sw.	U. S. Weather Bureau
Versailles	Morgan	1,037	11	72.3	-2.4	93	24	54	12	27	14	4.19	-0.64	1.74	0	11	14	10	6	sw.	E. M. Wilson
Warrensburg	Johnson	878	51	73.2	-0.7	95	24	53	12	27	58	4.90	-0.16	1.42	0	10	12	13	5	sw.	E. A. Markey
Warsaw	Benton	687	37	73.8	-0.0	95	24	52	12	32	43	4.71	-0.59	1.20	0	14	19	5	6	sw.	Everett Martin
Division means and extremes																					
..... 72.6 -0.7 96 24 48 16 37 5.04 +0.06 4.22 0 11 14 10 6 sw.																					
Southeastern Division																					
Advance	Stoddard	355	1	73.4	.....	91	24	51	8	34	1	5.27	.....	1.24	0	10	.....	.....	.....	.....	U. S. Weather Bureau
Arcadia	Iron	926	57	70.4	-1.4	91	24	49	3	32	60	3.49	-0.65	1.01</							



Daily Precipitation for June 1938

Stations	Drainage-basins	Day of month																														Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		..
Northern Division																																	
Amity	Grand	4.16	.01		.24		T.	T.		T.	.92	.52			T.	1.40		.01									.27	T.					7.53
Bethany	do	1.05		.15			.25				.40	.58			T.	.51											.08	.02					3.07
Bowling Green	Mississippi		.01		.04			.35				.05	1.70	.05			.14																3.90
Brunswick	Grand	1.77	.05		.28	.10		1.18			T.	1.50	.12		T.	.44		.17							.26			1.65	1.30				7.29
Canton, Lock No. 20	Mississippi		.35		.03			.35		T.	T.	.25				.03	.12																3.89
Chillicothe	Grand	.74			.80	.02		.87			.06	.54	.04			.03	.12							.55		.19	.14	.03	1.81				4.26
Clifton Hill	Chariton	.31		.23	.13		.05	.80		.03	.12	1.62				.02	.56											.97	.05				5.06
Columbia***	Missouri	.23		.42			1.50	.03	T.	.12	1.82	.39				.08	.24	1.22	1.39									1.06	.10				8.46
Conception	do	.09		.13		T.					T.	.34	T.	T.		.54	.83	T.										.10	T.			2.03	
Edgerton	Missouri	.60		.90			.01				.33	.74			.08		.47	.01							.38			.88	.01				4.41
Edina	Mississippi	.91			.10			.28			.03	.31	.21	.08			.26																2.64
Elberry	do	T.						.49			1.82	.89							.08									.54					4.33
Farber	do		.12			.21		.63			.23	1.98																1.12					4.82
Fayette	Missouri	.40		.37	.03			.64			.09	1.23				.11	.57		.01						.26			.31	.11				3.87
Fulton	do		.02		.30			.76		.08	.17	1.42	.25				.16	T.	.21		.08	.15						.43	T.				4.03
Gallatin	Grand	1.43			.57	.12		.76			.15	.77					.65											.53					4.98
Gorlin	Mississippi	1.06		.05			.35	T.		T.	.40	.86					.27											.43					4.98
Grant City	Grand	T.		.10	.03		T.			T.		.30	.15			.50	.93	.08						T.			.44	T.	.73				4.16
Hannibal	Mississippi	.03	.41		.04		T.	.57		T.	T.	.76	.15				.13											.27	.01			.04	2.26
Hermann	Missouri	.32			.22			.90		.08	.45	3.00	.09															.74	T.				3.82
Kahoka	Mississippi	1.12		.12			.08	T.		T.	.28	.28	.06				.52									.61	.36	.53	.01				6.00
Kansas City***	Missouri	.49		.31			.96	T.		T.	.02	.72	.29		.01	.49	.01	.01		.69						.88	.12	.38					3.56
Kansas City University	do	.69		.50	T.		.25	1.27	T.	.03	T.	.70					.37	.02										.17	T.				5.22
Kidder	Grand	.75	.01		.40			1.20		T.	.03	.87	T.				.56			.02	.03							.10	.16				5.23
King City	Missouri	.01		.40		T.	.03	T.		T.	.02	.50					.53	T.										.03				T.	4.38
Kirkville	Mississippi	.96		.08				.85		.02	.54	1.35					.37											.06	.97				1.52
LaBelle	do		.22	.04				.73				.74					.34																5.20
Lawson	Missouri	1.13		1.01			.34				.38	.90		.23			.73	.02							.56	.10	.08	1.38					4.19
Linneus	Grand	.46			.45	.37		.81			.06	.70	.06				.55											.96	.02				5.72
Louisiana	Mississippi			.13				.60			.07	1.10	.05						.02						.42	.15		.71	.10				3.87
Lucerne	Grand	.89		.12				.17			.31	.32					.40											.19	.01				3.25
Macou	Chariton	.28			.24	T.		2.55				.70	.03				.40											1.27					2.41
Madison	Mississippi	.30	.05		.21			1.53			.13	.70	.88				.30											.19	.01				5.47
Maryville	Missouri	.09		.13			T.				.04	.52		T.	.63	.39	.15											.12	.04				5.35
Memphis	Mississippi	1.74						.55			.16		.16				.54											.33				.04	2.03
Mexico	do		.25		.18			.95		.05	.08	2.40	.15				.26		.05									.60					4.08
Milan	Grand	1.15			.12			1.42			.21	.23					.63											.41	.03				5.87
Moberly	Mississippi	1.25		.20				.92		.04	.04	.90					.55	.02											.41				4.20
Monroe City	do	.82		.16	.09			.45			.62	.17					.32											1.00	.22				5.14
Oregon	Missouri	.09		.27		.02			T.		.27				.52	.95	.05							.78		.17	.46	.36					4.40
Palmyra	Mississippi		.38		.06			.63			T.	.79	.10				.25											.40	.02				4.59
Paris	do	T.	.25		.22			.71			.06	.65	.16				.27											.38	.04				3.16
Perry	do		.25		.14			.53				.215					.18											.89	.03				3.46
Philadelphia	do		.38		.22			.38				.64					.14											.45					4.31
St. Charles	Missouri			.05	.07					.21	.77	.27	.08								.04				.09			.33	.54	.09			3.21
St. Joseph	do	.07		.21		T.	T.	T.		.01	.22	.36		T.	.82		.07											1.05					5.02
Saverton, Lock No. 22	Mississippi	.04	.34		.18			.64			.02	1.62	.19				.10		.07									.17	.01				2.10
Shelbina	do	.16	.66		.19			.76				.66	.19				.24											.02	.18				4.46
Shelbyville	do	.37			.11			.74			.04	.58					.34											.02	1.25				4.13
Stellenville	do	.50		.08	.11			1.45		.03		.05					.30											.10					2.71
Tarkio	Missouri	.03	.12			.05					.16	.22	.55			.40	.10	.15							.30			.35	1.50				4.67
Trenton	Grand	.07		.26	.44	T.	.23			T.	.06	.59					.51									.15		.10					3.51
Troy	Mississippi			.02			.48				.64	1.50					.01	T.		T.								.16	.13				2.45
Unionville	Chariton	.84		.08		.02					.50	.25					1.30											.42					3.88
Warrenton	Mississippi	.02		.22			.46			.10	1.10	2.43	.06				.05		.02									.27	.47				5.37
Keokuk, Iowa	do	.14		.08			.06			.11	.49	.23			.28	.12											.47	.40	.74				3.70
Southwestern Division																																	
Altona	Osage	.76	.07				.52				.14	1.6																					



## Daily Precipitation for June 1938—Continued from preceding page

Stations	Drainage-basins	Day of month																															Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	..	
Southeastern Div.—Continued																																	
Bragg City	St. Francis	1.45						.49									.50	.98	T.	.55	.13					.41							4.51
Campbell	do	.40			T.			.44		.04	.02	.02					.78	.04	T.	1.31				T.		.02							2.07
Cape Girardeau	Mississippi	.24			T.			.10	.02	.76	.02	1.21	1.19				1.42	.25	.06	1.36	.05				.41		T.	.08					7.17
Caruthersville	do	1.19						.40	.25		.01	.05					1.63	.35		.71	.05				.76								5.40
Centerville	Black							.75	.21	.35	.01	.15					.93	.70	.02		1.08							.52					4.72
Crystal City	Mississippi			.05				.42	.67	T.	7.84	.34					.42	T.	.16		.01												10.05
Cuba	Meramec							.59	.40		1.00						.30	.35	1.09	.68	.26					.15							3.69
Dexter	St. Francis							T.	.23	.36		.55					1.65	1.09	.79	1.50				.02									6.82
Doniphan	Black			.23				.29	.43	.91							.15	.38	.09	1.15				.02			.58						4.18
Farmington	St. Francis							.39	.45	.01	.38						.58	.34	.61	.49	T.	.24				.17	T.						3.53
Fisk	do	T.						.19	.32	.03	T.	1.14					T.	.96		.64	.26	.50					.18						4.02
Fredericktown	do							.65			.17	.23					.96																5.28
Goodland	Black							.38	.27	.25	.13						.84	.56	.10	1.15				.25		.35							5.28
Greenville	St. Francis							.26	.86	.21							.55	.60		.36				.05		.16							5.86
Jackson	Mississippi	.71						.08	.80	.43	1.14						.80	.36	.05	.82				.55		.12		T.					4.02
Jerome	Gasconade	.08	.15					.68	.12	.25	.80	.05					.05	.12	.15	1.30						.35							4.34
Koshkonong	Black				.24			1.00		.19	.26	.19					T.	.40	.41	1.30						.35							3.75
Keeper	do							.17	.12	.55		.10	T.				.30	1.02	1.08							.30							3.48
Licking (near)	Gasconade							.55	.18		.05						1.25	.60	.15	.20				.20		.15							4.65
Marble Hill	Mississippi	.40						.30		.80							.05		.80														9.50
Meramec Park	Meramec						1.10	.60	1.40	5.30	.20						.02	.20	.82	.24	1.43				.34		T.						3.85
Morehouse	Mississippi	.45						.16	.08	.05	.06						.02	.20	.82	.24	1.43												5.61
New Madrid	do	.66		.03	.18			.11	.26	.09	.01	.02					2.14	1.10	.21	.38	.11				.31								6.46
Owensville	Gasconade	.12						.68	.17	.60	4.55	.22						.08		.20						.58	.10						7.94
Pacific	Meramec							.75	.30	.60	5.20	.03						.15		.48	.10	.20											2.18
Parma	St. Francis	.83	.10					.10	.22								.70	.95	.25	.23	.07				.97		.03						5.73
Poplar Bluff	Black	.43						.16	.26	.24		1.44					1.05		.02	.70							.02						8.27
Richwoods	Meramec	.05		.03				.75	.30	.20	5.00	.05					.19	.08	.37	.01	.01												2.24
Rolla	do	T.		.08				.58	.25	T.	.42						.03	.03	.76	.06	T.				T.	.05	T.	.26	.07	.02			4.50
St. Louis**	Mississippi	.04		T.	.01	.35	.15			.41	.39	1.95	T.				T.	T.	.05					T.	.02		.78	.01					6.46
St. Louis Airport*	Missouri	.01		T.	.02	.23	.11			2.71	2.38	1.14					.07	.03	.21	.62				.24		.32	.02						4.58
St. Louis University*	Mississippi	.10		.01	.01	.19	.18			.47	.41	1.70					1.50	.14	.67	1.56							.32	.06					6.12
Salem	Meramec	T.				.08		.60		.74	.20		.25				.10	.02	1.30	.48	.33				.18								3.19
St. Louis	Mississippi	.43						.05	.10	.90	2.32	4.11					.10		.14		.31				.19		.58						9.39
Union	Meramec			.10				.64		.23	.43	3.25	T.				.09	T.	.09	T.				T.	T.		.40	T.					5.10
Valley Park	do	T.		T.				.43		.17	T.	T.					T.	1.28	.13	.31	.20				.72		.38						3.62
Van Buren	Black							.43		.20	.65	2.70	.28							.06				.36			1.21	.01					6.35
Washington Univ.	Mississippi	.31		.02				.55		.28	.38	.10	.05				T.	.06	.70	.23	.48					.69	T.						4.20
West Plains	Black			.07				1.16		.19	.18	.78	.01	.76				.33	1.57	.01	.47	.10				.19							4.59
Williamsville	do							.19	.18	.78	.01	.76																					5.59
Willow Sprgs. (near)	White			.03				1.20	.25	.35	.03	.82						1.46	.23	.33													5.22
Zalma	Mississippi							.61		.66	T.	.71	.25				1.08	.90	.49	.39				.13									3.32
Calro, Ill.***	do	.90			T.			.08	T.	.15	.45	.01					.79	T.	.23	.23	.48				T.		T.						

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. †† Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. T. Trace, or less than 0.01 inch.

\*\*\* Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. \* Precipitation in the next following measurement; separate dates of fall not recorded. † Precipitation is for 24-hour period, midnight to midnight. ‡ Estimated. †† Partially estimated. ††† Incomplete.

NOTE:—In addition to the stations shown on daily temperature page records of daily temperatures are kept at the following stations in Missouri: Advance, Appleton, City, Bethany, Bolivar, Boonville, Campbell, Canton Lock No. 20, Clifton Hill, Columbia Airport, Conception, Dean, Edgerton, Elsberry, Fulton, Goodland, Greenville, Kansas City University, Kidder, Kirksville Airport, Koshkonong, Lakeside, Licking (near), Lockwood, Marble Hill, Marshall Airport, Mount Vernon, St. Joseph Airport, St. Louis Airport, St. Louis University, Saverton Lock No. 22, Seligman, Seymour, Springfield Airport, Steffenville, Tarkio, Versailles, Warsaw, and Washington University.

**Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for June 1938**  
(See precipitation data in table on preceding page)

Station	Data	Day of month																														Monthly	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		..
Columbia.....	{ Evaporation .....	.116	.159	.216	.071	.173	.101	.213	.285	.010	.099	.241	.072	.156	.207	.174	.190	.010	.108	.123	.158	.206	.182	.192	.238	.261	.071	.075	.190	.207	.236	...	4.740
	{ Mean temperature .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
	{ Wind movement .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Lakeside (Osage Dam)	{ Evaporation .....	.308	.291	.281	.213	.308	.299	.206	.241	.239	.260	.348	.108	.253	.218	.350	.185	.130	.215	.160	.212	.287	.286	.249	.297	.333	.285	.080	.221	.267	.314	...	7.444
	{ Mean temperature .....	.73	.70	.69	.74	.72	.78	.74	.70	.73	.75	.70	.68	.69	.78	.76	.74	.74	.74	.76	.76	.74	.76	.80	.82	.81	.70	.70	.68	.70	.78	...	73.6
	{ Wind movement .....	.68	.74	.40	.40	.40	.33	.48	.28	.34	.35	.73	.46	.40	.56	.60	.28	.19	.43	.35	.27	.26	.20	.17	.42	.36	.92	.38	.27	.30	.40	...	1,235
St. Louis ..... (Washington University)	{ Evaporation .....	....	.207	.261	.207	.275	.279	.234	.177	.171	.158	....	.086	.213	.233	.250	.193	.195	.098	.118	.067	.133	.117	.230	.176	.231	.225	.096	.239	.229	.190	...	5.666
	{ Mean temperature .....	.66	.71	.69	.75	.70	.76	.71	.68	.70	.76	.72	.68	.70	.74	.79	.74	.74	.76	.76	.76	.76	.76	.80	.82	.84	.69	.68	.68	.68	.74	...	73.3
	{ Wind movement .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...

Observations taken at 8:00 a. m. except at 7:30 a. m. at Lakeside. For Lakeside description see April 1932 report. For Columbia description see Annual 1918 and April 1919 Climatological Data. \*\*\* Evaporation included in next measurement.

*Continued from page 31*

cial streets and basements and stores were flooded. Highways and roads were flooded in the area in low places, hampering traffic and causing detours. Two boys were marooned near Berger and forced to spend the night in



Daily Temperatures for June 1938

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	..	Mean		
Northern Division																																		
Brunswick §§	Maximum...	78	84	80	85	83	83	77	76	76	83	71	79	79	89	76	80	86	84	87	87	89	90	94	95	90	70	78	80	82	92	..	82.8	
	Minimum...	66	58	58	59	57	59	57	57	58	64	65	57	58	59	65	62	63	64	64	66	63	63	69	72	75	66	55	55	56	58	..	61.6	
Chillicothe §§	Maximum...	77	82	79	83	84	84	76	74	77	82	74	81	80	89	85	81	85	85	86	88	89	91	92	96	84	73	76	79	85	93	..	83.0	
	Minimum...	64	55	59	57	54	68	52	54	62	65	64	52	58	67	64	58	61	61	62	65	62	68	71	73	72	62	50	54	57	69	..	61.3	
Columbia	Maximum...	80	80	80	84	83	86	77	79	77	85	73	78	81	89	88	83	82	83	86	87	87	89	93	94	90	71	75	77	81	90	..	82.9	
	Minimum...	64	58	56	60	55	63	57	55	63	63	63	55	57	66	63	62	63	63	66	61	65	65	73	70	63	54	56	57	65	..	62.6		
Fayette	Maximum...	82	82	79	82	81	81	78	78	75	82	72	78	79	88	85	81	84	82	86	86	88	89	92	93	87	71	75	78	80	91	..	82.3	
	Minimum...	64	58	55	60	55	63	57	55	63	63	63	55	57	66	63	62	63	63	66	61	65	65	73	70	63	54	56	57	65	..	61.4		
Grant City	Maximum...	76	80	75	80	85	85	76	75	77	82	78	80	80	90	82	77	82	84	84	81	88	87	91	97	89	74	76	79	85	95	..	82.4	
	Minimum...	61	53	58	53	53	68	50	49	62	65	58	49	60	62	59	56	58	62	62	64	66	68	67	72	67	60	51	54	58	71	..	59.9	
Hannibal	Maximum...	79	78	80	81	82	85	79	76	73	82	77	75	78	86	85	83	80	84	86	83	89	84	92	91	89	73	74	74	79	88	..	81.5	
	Minimum...	63	57	59	60	56	65	56	55	62	63	62	55	53	67	63	60	62	62	65	64	65	67	70	72	70	62	53	56	59	64	..	61.7	
Kansas City	Maximum...	78	82	78	84	87	88	78	78	77	85	74	81	85	89	87	82	86	83	86	90	92	90	92	97	81	69	75	80	86	93	..	83.8	
	Minimum...	63	60	64	61	59	64	57	60	65	66	61	51	65	65	66	66	62	66	65	68	71	73	72	75	67	63	56	58	63	73	..	64.3	
Kirksville	Maximum...	80	79	77	80	81	82	78	76	77	79	78	79	78	86	83	80	84	86	87	86	86	88	91	92	88	75	76	77	78	89	..	81.8	
	Minimum...	62	54	55	58	50	61	53	59	59	63	61	53	59	68	63	58	58	62	60	62	60	67	68	73	72	68	51	52	57	67	..	60.4	
Lawson	Maximum...	77	81	76	83	83	85	61	53	59	59	83	77	78	80	87	85	80	83	83	85	87	86	85	90	94	83	69	75	77	84	91	..	82.3
	Minimum...	62	56	58	60	60	67	53	58	62	65	62	53	58	69	63	62	60	62	62	65	65	68	70	71	68	62	51	54	56	70	..	61.7	
Louisiana	Maximum...	75	80	75	75	78	82	76	76	72	80	72	74	76	85	87	80	85	85	87	87	85	87	92	95	95	73	75	75	75	87	..	80.9	
	Minimum...	57	60	48	60	45	65	60	50	60	60	60	64	57	80	69	67	80	89	87	81	83	85	89	91	95	95	90	69	74	76	81	..	82.8
Macon §§	Maximum...	80	81	82	84	83	84	77	77	71	84	74	79	80	90	81	78	81	82	84	86	90	89	91	92	91	74	75	76	85	94	..	82.5	
	Minimum...	62	56	55	59	54	64	54	51	60	62	63	53	56	69	63	58	58	58	61	61	60	65	69	72	72	61	50	54	56	62	..	59.7	
Maryville	Maximum...	75	79	77	80	86	86	76	74	79	83	77	78	80	90	81	78	81	82	84	86	90	89	91	97	91	74	75	76	85	94	..	82.5	
	Minimum...	60	54	57	58	59	66	51	54	63	65	60	53	61	63	60	61	60	62	63	65	66	67	67	70	67	61	52	55	59	71	..	61.0	
Mexico §§	Maximum...	82	80	82	85	84	88	78	79	77	86	72	78	81	89	89	80	82	84	86	85	88	89	93	93	68	75	76	81	91	..	83.4		
	Minimum...	65	55	52	60	52	64	58	54	60	62	63	54	54	63	60	63	60	62	64	59	61	69	73	73	63	52	54	55	62	..	60.4		
Moberly	Maximum...	78	82	79	85	83	81	80	79	73	82	75	80	80	89	87	82	85	80	90	84	89	89	92	93	89	72	82	79	82	90	..	83.0	
	Minimum...	62	54	50	52	50	64	54	53	58	62	61	52	51	64	61	57	58	59	62	57	65	70	73	68	60	49	50	52	62	..	58.3		
Oregon	Maximum...	78	83	77	82	88	86	77	79	79	79	79	81	83	89	84	76	84	83	88	90	91	87	93	98	87	77	78	79	88	94	..	84.1	
	Minimum...	58	54	60	58	61	68	52	57	64	61	60	54	61	61	60	63	61	63	64	65	68	70	71	66	62	51	54	59	72	..	61.6		
St. Charles §§	Maximum...	81	84	84	88	87	89	80	81	77	89	80	81	82	89	89	84	84	84	87	87	91	84	95	95	90	78	79	81	90	..	84.9		
	Minimum...	67	59	55	63	55	55	63	56	63	62	64	59	57	64	68	67	69	64	67	65	64	71	73	78	68	60	57	64	62	..	63.5		
St. Joseph	Maximum...	79	82	77	83	88	89	77	78	78	84	74	80	82	90	81	75	83	86	86	90	90	87	89	97	77	77	78	88	94	..	83.4		
	Minimum...	61	56	64	59	59	61	56	59	65	66	60	53	63	64	63	65	61	64	65	67	70	72	72	75	65	61	54	59	61	73	..	63.1	
Trenton	Maximum...	79	81	75	74	83	86	80	78	77	85	74	81	82	89	86	79	84	86	88	88	91	95	98	94	78	75	79	86	94	..	83.8		
	Minimum...	63	56	59	56	58	67	52	53	56	65	64	53	56	59	57	60	61	62	62	64	64	66	67	68	72	61	51	55	57	60	..	60.1	
Unionville §§	Maximum...	78	82	80	83	82	85	78	78	72	80	80	78	79	78	90	84	82	83	89	88	90	92	96	98	88	75	76	80	93	..	83.4		
	Minimum...	63	51	56	57	60	61	50	50	59	64	61	56	64	62	56	57	60	60	63	62	67	69	72	70	54	49	54	56	62	..	59.4		
Warrenton	Maximum...	82	79	81	82	83	87	80	77	75	87	80	76	79	85	86	84	78	82	84	82	85	83	91	91	91	78	73	74	78	85	..	81.9	
	Minimum...	67	58	59	62	66	65	60	57	62	64	61	56	58	63	64	65	66	62	64	63	62	67	69	72	73	64	59	55	56	60	..	62.3	
Keokuk, Iowa	Maximum...	78	81	80	80	82	83	75	77	72	81	72	78	78	87	85	81	78	83	85	85	89	90	93	94	88	72	75	74	77	88	..	81.0	
	Minimum...	62	59	62	60	56	62	55	55	62	61	61	55	57	64	65	60	62	64	64	66	66	72	70	65	60								







## CLIMATOLOGICAL DATA

## MISSOURI SECTION

W. J. MOXOM  
ST. LOUIS, MO.

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JULY 1938

No. 7

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## GENERAL SUMMARY

The first thirteen days of July 1938 were the warmest during the month and maxima of 100° and higher occurred at a number of stations on 6 to 8 days of this period. Only a few stations had maximum temperatures as high as 100° after the 13th. Although the mean temperature for the State as a whole averaged 1.7° above normal, it was 0.9° lower than the average of the last 10 years. However, it should be stated that July temperatures during the last 10 year period averaged higher than any other decade of record.

The rainfall during the month was fairly well distributed as to time of occurrence, and the average amount for the State as a whole was only slightly less than the normal. However, the southwest quadrant received considerably less than the normal amount, several stations reported less than one inch, while the eastern and northern portions of the State, with the exception of the extreme northeastern portion, received more than the normal.

The month was generally favorable for farm work, and crops made fair to good growth, although the hot dry weather was beginning to show effect on growing crops in many sections by the close of month. There were some reports of grasshopper damage in the central part of the State.

River stages were comparatively low throughout the month.

## TEMPERATURE

The monthly mean temperature for the State, 82 stations reporting, was 79.7°, or 1.7° above normal. The highest monthly mean was 82.4° at Kansas City, and the lowest monthly mean was 76.2° at Greenville. The highest temperature recorded was 110° at Unionville on the 12th, and the lowest was 53° at Edgerton, Louisiana and Moberly on the 15th, at Greenville on the 16th, and at Louisiana on the 21st and 24th. The greatest daily range was 42° at Edgerton on the 15th.

## PRECIPITATION

The average precipitation for the State, 142 stations reporting, was 3.50 inches, or 0.19 inch less than normal. The greatest local monthly amount was 9.49 inches at New Madrid, and the least local monthly amount was 0.37 inch at Galena. The greatest amount in any twenty-four hours was 5.35 inches at Parma on the 31st. The average number of days with 0.01 inch or more of precipitation was 7.

## MISCELLANEOUS PHENOMENA

Aurora.—30th, 31st.

Dust.—Locally on 7th.

Fog.—Dense, 3d, 8th, 9th, 21st, 22d, 25th, 26th, 31st.

Hail.—Light, 7th at Versailles, 8th at Hannibal and Mount Vernon, 12th at Macon, 13th at Farmington, Linneus, and Macon, 25th at Grant City and Steffenville; heavy, 7th at Clifton Hill; many windows broken and gardens damaged.

Halos.—Solar, 1st, 6th, 11th, 13th, 14th, 16th, 20th, 22d, 28th; lunar, 2d, 12th.

Thunderstorms.—Local, 1st, 2d, 3d, 5th, 6th, 8th, 9th, 10th, 12th, 14th, 16th, 18th, 20th, 21st, 22d, 23d, 25th, 26th,

28th, 29th, 30th, 31st; more or less general, 7th, 13th, 17th, 27th.

Windstorms.—On the 7th at Clifton Hill with damage to houses and crops estimated at \$5,000; also at St. Louis with minor damage to window glass and trees. On the 13th at Mokane with damage to buildings and trees and at High Hill and Jonesburg where considerable damage was done to trees.

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind			Relative humidity			Percentage of sunshine	
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12 noon		6:30 p. m.
Columbia.....	29.93	30.07	9	29.70	1	6.1	25	nw.	27	80	52	54	81
Kansas City.....	29.92	30.10	18	29.64	1	8.0	25	nw.	27	77	46	44	85
St. Joseph.....	29.92	30.11	18	29.63	1	7.1	32	nw.	1	78	47	43	83
St. Louis.....	29.94	30.10	10	29.74	1	9.1	33	nw.	7	72	48	52	69
Springfield.....	29.95	30.01	10	29.78	1	7.2	21	s.	1	78	53	50	70
Cairo, Ill.....	29.95	30.17	12	29.81	31	6.1	21	se.	12	84	59	60	76
Keokuk, Iowa..	29.94	30.09	10	29.69	1	6.0	23	nw.	6	79	53	56	82

## COMPARATIVE DATA FOR JULY

Year	Temperature			Precipitation					Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy
1888.....	79.3	111	50	2.85	4.44	1.50	2.62	0	7	..	..	..
1889.....	77.1	107	46	4.02	4.22	3.80	4.03	0	7	..	..	..
1890.....	79.6	110	42	3.04	3.12	3.90	2.10	0	7	..	..	..
1891.....	72.7	103	45	3.23	4.13	4.16	1.41	0	7	..	..	..
1892.....	75.8	102	45	4.88	5.27	4.95	4.43	0	9	12	70	..
1893.....	77.3	103	51	4.67	4.72	6.19	3.10	0	8	14	72	..
1894.....	76.5	109	42	2.67	1.48	3.43	3.11	0	6	18	70	..
1895.....	74.4	106	45	6.77	6.36	6.91	7.03	0	10	10	12	..
1896.....	77.3	108	48	5.51	7.53	4.34	4.66	0	9	15	11	..
1897.....	78.7	106	48	3.14	4.11	2.70	2.62	0	6	19	9	..
1898.....	76.1	104	42	5.72	5.00	5.71	6.44	0	9	16	10	..
1899.....	76.0	102	43	4.50	4.88	4.32	4.30	0	9	15	11	..
1900.....	76.9	102	46	4.15	3.91	4.58	3.96	0	8	17	10	..
1901.....	85.4	116	46	2.02	2.23	1.93	1.90	0	5	19	10	..
1902.....	77.0	103	50	4.10	5.95	4.54	1.80	0	8	17	11	..
1903.....	77.4	102	51	3.40	2.79	3.56	3.85	0	8	17	10	..
1904.....	74.2	100	47	4.61	4.86	5.32	3.65	0	10	15	11	..
1905.....	73.4	101	48	8.07	4.86	9.90	9.46	0	12	12	10	..
1906.....	74.7	100	48	3.54	2.33	4.11	4.19	0	8	17	9	..
1907.....	78.4	105	51	4.56	6.62	3.78	3.28	0	8	19	8	..
1908.....	76.5	101	49	3.36	3.36	3.09	3.64	0	8	18	9	..
1909.....	76.7	102	41	6.16	7.01	6.33	5.14	0	10	17	8	..
1910.....	76.8	109	46	5.79	4.79	4.59	7.99	0	9	16	9	..
1911.....	78.0	113	43	3.68	3.41	4.78	2.86	0	8	16	9	..
1912.....	78.8	104	52	2.88	2.15	2.53	3.95	0	7	18	9	..
1913.....	80.2	108	47	3.10	2.52	2.86	3.93	0	7	18	9	..
1914.....	80.5	109	45	2.67	2.48	3.98	1.56	0	7	17	9	..
1915.....	74.6	102	42	5.74	9.05	4.39	3.78	0	12	14	9	..
1916.....	81.6	109	52	1.22	1.28	1.01	1.36	0	3	25	5	..
1917.....	77.5	107	42	3.08	1.71	3.36	4.18	0	8	20	8	..
1918.....	77.1	110	41	1.62	1.98	1.89	1.00	0	6	19	8	..
1919.....	80.0	105	50	2.30	3.00	2.21	1.69	0	5	23	6	..
1920.....	76.3	105	47	3.30	3.69	3.17	3.05	0	7	18	8	..
1921.....	80.3	109	46	2.32	2.29	2.39	2.28	0	5	20	8	..
1922.....	76.8	103	46	5.50	6.87	5.57	4.06	0	8	17	9	..
1923.....	78.2	105	50	3.16	2.61	4.29	2.59	0	6	18	8	..
1924.....	73.3	103	40	5.55	4.42	6.65	5.57	0	10	15	11	..
1925.....	77.9	106	46	2.70	2.56	2.76	2.79	0	7	16	10	..
1926.....	78.0	108	40	3.07	3.66	2.54	3.02	0	7	17	9	..
1927.....	75.8	101	48	4.16	2.82	5.38	4.28	0	8	18	9	..
1928.....	77.2	102	48	2.93	3.47	3.15	2.16	0	7	17	10	..
1929.....	77.8	104	50	4.03	5.50	2.58	4.01	0	8	16	10	..
1930.....	81.2	113	42	1.00	0.50	1.48	1.01	0	3	22	7	..
1931.....	80.3	110	49	3.31	2.83	3.45	3.65	0	7	18	9	..
1932.....	79.8	109	48	3.61	3.89	4.08	2.85	0	7	19	8	..
1933.....	79.3	108	49	2.67	1.73	2.44	3.84	0	5	18	9	..
1934.....	86.2	117	48	1.18	0.82	1.22	1.50	0	4	20	9	..
1935.....	80.8	104	53	3.30	3.90	2.06	3.94	0	6	20	9	..
1936.....	85.3	118	44	1.52	0.72	1.48	2.37	0	3	23	6	..
1937.....	77.9	105	45	4.06	4.80	3.34	4.05	0	8	17	11	..
1938.....	79.7	110	53	3.50	2.91	2.58	5.00	0	7	19	8	..
Period.....	78.0	118	40	3.69	3.76	3.75	3.55	0	7	18	9	..



## Climatological Data for July 1938

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observers		
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Length of record, years	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelted	With precip., .01 inch or more	Clear			Partly cloudy	Cloudy
Northern Division																					
Bethany	Harrison	916	43	79.6	+ 3.3	106	11	57	15	36	45	2.42	-1.74	0.78	0	6	23	7	1	se.	A. S. Cumming
Brunswick	Chariton	652	57	80.6	+ 4.5	101	4†	61	15†	33	59	3.79	-0.32	2.05	0	7	23	5	3	sw.	O. K. Benecke
Canton, Look & Dam 20	Lewis	488	0	80.6	.....	104	25	61	23	33	8	2.72	.....	1.73	0	8	13	10	8	sw.	Lockmaster
Chillicothe	Livingston	779	29	80.8	+ 3.8	104	11	56	15	37	32	1.37	-2.05	1.16	0	5	25	3	3	sw.	Win. J. Olenhouse
Clifton Hill	Randolph	731	39	79.1	+ 2.7	99	4	60	15	31	29	4.70	+1.34	2.52	0	7	23	5	3	sw.	Dr. A. J. Bradsher
Columbia	Boone	740	48	81.0	+ 4.1	100	11	61	15	28	48	2.60	-0.89	2.39	0	5	14	12	5	sw.	U. S. Weather Bureau
Conception	Nodaway	980	49	81.6	+ 5.0	104	4†	62	18	32	54	1.80	-2.87	0.73	0	7	17	13	1	nw	Fr. Adelhelm Hess
Edgerton	Platte	856	18	79.4	+ 3.3	103	10†	53	15	42	27	3.85	+0.35	2.66	0	7	23	4	4	s.	Fred L. Stiff
Elsherry	Lincoln	449	7	78.1	.....	100	12	55	15	35	7	2.82	.....	2.53	0	3	21	8	2	nw.	Ray E. Mills
Fayette	Howard	680	58	80.0	+ 2.8	100	21	60	15	30	55	4.65	+1.40	2.99	0	6	23	6	2	sw.	Morrison Observatory
Fulton	Callaway	818	50	80.6	+ 2.9	99	12	61	15	31	46	3.73	+0.44	1.44	0	7	22	7	2	sw.	Clyde C. Herring
Gorin	Scotland	700	.....	.....	.....	.....	.....	.....	.....	.....	51	1.90	-1.71	0.75	0	7	24	7	0	se.	W. L. Harker
Grant City	Worth	1,134	34	79.2	+ 3.0	106	12	56	23	37	46	4.52	-0.11	1.26	0	7	16	12	3	sw.	Howard Rybolt
Hannibal	Marion	759	46	79.0	+ 2.2	98	11	62	21	27	54	3.23	+0.14	1.72	0	8	15	7	9	sw.	Hannibal Water Dept.
Kansas City	Jackson	741	49	82.4	+ 4.3	102	10	64	15	31	49	3.82	-0.31	3.10	0	7	18	8	5	sw.	U. S. Weather Bureau
Kansas City University	Jackson	908	0	80.2	.....	100	3†	60	15†	33	0	4.20	.....	3.21	0	6	18	9	4	sw.	University of Kansas City
Kidder	Caldwell	1,020	46	80.0	+ 3.4	103	9	60	15	34	50	2.03	-1.85	1.65	0	5	27	1	3	sw.	Mrs. Geraldine Terry
King City	Gentry	1,095	.....	.....	.....	.....	.....	.....	.....	.....	12	1.08	-2.46	0.63	0	6	4	25	2	sw.	John M. Martin
Kirksville	Adair	969	49	78.6	+ 2.6	99	11	58	15	30	56	3.26	-1.04	1.41	0	8	12	18	1	sw.	Charles Noble
Lawson	Ray	1,070	0	79.4	.....	99	10†	61	18†	29	0	3.14	.....	2.86	0	5	22	7	2	sw.	Elmer E. Lamb
Linn	Linn	816	.....	.....	.....	.....	.....	.....	.....	.....	6	1.46	.....	0.87	0	7	22	9	0	sw.	H. D. Taggart
Louisiana	Pike	469	44	76.7	+ 0.3	100	12	53	15†	37	57	2.15	-1.45	1.72	0	4	14	15	2	w.	Stark Bro's Nurseries
Macon	Macon	875	39	79.6	+ 2.4	100	11	60	15†	32	45	3.23	-0.18	1.30	0	8	21	7	3	sw.	Mrs. W. C. Brown
Maryville	Nodaway	1,169	48	79.9	+ 4.2	103	11	60	23	34	44	1.85	-3.38	0.42	0	9	22	3	6	sw.	R. B. Montgomery
Mexico	Audrain	800	49	80.4	+ 3.1	102	11	60	19	31	60	5.94	+2.73	4.25	0	8	.....	.....	.....	sw.	Mrs. Abbie Snoddy
Moberly	Randolph	875	1	79.4	.....	99	2†	53	15	35	1	4.03	.....	2.35	0	5	20	10	1	se.	McComick Hospital
Oregon	Holt	1,048	82	80.8	+ 5.2	103	4†	61	21	33	82	2.32	-1.86	1.25	0	8	26	4	1	sw.	Miss Mina Wright
St. Charles	St. Charles	520	50	80.9	+ 2.8	103	11	61	22	32	60	3.76	+0.77	1.86	0	6	22	7	2	sw.	Martin L. Comann
St. Joseph	Buchanan	957	28	82.0	+ 4.6	103	10	62	15	33	66	2.85	-0.93	1.90	0	7	23	6	2	s.	U. S. Weather Bureau
Steffenville	Lewis	650	40	78.7	+ 0.9	102	11	58	15†	34	45	2.81	-1.30	1.50	0	6	14	17	0	e.	Frank Hall
Tarkio	Atchison	916	35	78.3	+ 1.5	101	5	58	23	36	44	5.34	+1.19	1.53	0	9	21	7	3	sw.	Albert Volker
Trenton	Grundy	822	42	81.6	+ 4.8	108	11	58	15	38	43	1.76	-2.31	0.75	0	7	23	7	1	s.	W. H. Estes
Unionville	Putnam	1,062	45	81.2	+ 4.7	110	12	60	14†	38	45	4.52	+0.40	1.60	0	7	22	4	5	s.	John H. Schick
Warrenton	Warren	816	56	79.2	+ 1.4	97	12	61	15	25	48	4.79	+1.65	2.17	0	8	9	17	5	sw.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.	574	66	79.4	+ 2.5	98	12	63	18	25	66	1.63	-1.78	0.74	0	9	12	10	9	sw.	U. S. Weather Bureau
Division means and extremes		.....	.....	79.9	+ 3.2	110	12	53	15†	42	.....	2.91	-0.85	4.25	0	7	19	9	3	sw.	
Southwestern Division																					
Appleton City	St. Clair	813	43	79.6	+ 1.4	98	3†	58	24	37	46	1.55	-2.76	0.85	0	4	21	6	4	sw.	Rolla Brown
Bolivar	Polk	1,071	35	80.2	+ 2.9	101	13	60	15	33	43	2.80	-0.92	2.37	0	3	8	20	3	sw.	Southwest Baptist College
Boonville	Cooper	650	0	80.2	.....	100	4	62	7	28	61	2.68	-0.56	1.86	0	5	21	6	4	se.	Boonville Water Dept.
Clinton	Henry	765	45	80.1	+ 1.8	100	4†	60	15	36	51	2.98	-0.45	2.76	0	3	.....	.....	.....	sw.	U. S. Weather Bureau
Dean H.	McDonald	1,000	34	78.4	+ 1.1	98	3†	57	20†	39	39	1.59	-2.82	0.65	0	4	19	10	2	w.	E. S. Taylor
Eldon	Miller	934	43	79.6	+ 2.4	100	4†	60	15†	30	39	3.97	+0.75	1.71	0	8	18	10	3	sw.	E. H. Shepherd
Garber	Taney	950	4	79.1	.....	101	3†	57	15	39	4	2.88	.....	1.12	0	8	14	6	11	e.	William H. Durham
Harrisonville	Cass	904	60	79.5	+ 1.8	100	4	61	23†	36	63	1.44	-2.17	1.17	0	3	17	7	7	sw.	John H. Patterson
Jefferson City	Cole	557	48	78.0	- 0.1	98	3†	61	15†	27	56	3.79	+0.68	1.94	0	7	18	10	3	s.	Mrs. Frank Kliegel
Lakeside	Miller	595	7	80.4	.....	101	2†	61	15†	34	7	5.41	.....	1.95	0	9	.....	.....	.....	sw.	W. S. Frame
Lamar	Barton	980	50	80.4	+ 2.0	98	5†	59	15	36	57	0.98	-3.24	0.38	0	4	22	4	5	sw.	Jesse A. Mann
Lebanon	Laclede	1,265	50	79.1	+ 2.2	102	5	59	15†	33	51	3.57	-0.39	1.44	0	6	16	11	4	sw.	Mrs. Rosa E. Montellus
Lexington	Lafayette	688	53	81.7	+ 4.3	102	11	64	15†	30	54	4.39	+0.38	4.03	0	6	25	4	2	se.	Miss Carrie Loomis
Lockwood	Dade	1,078	32	80.2	+ 2.6	99	11	59	15	34	42	2.40	-2.36	1.95	0	3	19	9	3	sw.	Hubert A. Nieman
Marshall	Saline	779	51	80.4	+ 2.9	98	4†	62	14†	33	48	3.33	-0.24	2.58	0	3	27	3	1	sw.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	37	79.9	+ 3.5	100	11	58	15	35	41	1.28	-2.61	0.47	0	6	20	7	4	se.	Mo. Fruit Exp. Station
Mount Vernon	Lawrence	1,174	26	79.8	+ 2.1	98	3†	60	15	33	38	2.58	-2.61	1.15	0	5	17	14	0	sw.	G. H. Boswell
Neosho	Newton	1,011	51	78.8	+ 1.3	99	15	57	24	41	55	1.78	-2.87	0.80	0	6	26	2	3	s.	U. S. Fisheries Station
Nevada	Nevada	862	45	81.3	+ 1.7	100	3†	60	19†	37	46	0.94	-2.72	0.43	0	5	23	5	3	sw.	T. J. Kaupp
Sedalia	Pettis	910	25	80.4	+ 2.9	100	4	60	15	32	27	3.92	-0.52	1.70	0	8	23	3	5	s.	Mrs. Laura S. Trader
Seligman	Barry	1,542	37	77.2	+ 0.5	92	5†	62	7†	27	25	2.96	-1.16	0.83	0	7	17	10	2	sw.	Floyd E. Fawver
Seymour (near)	Webster	1,642	32	76.8	+ 1.3	95	5†	56	15	33	32	2.42	-1.52	0.65	0	6	18	6	7	s.	A. L. Hailey
Springfield	Greene	1,301	50	80.1	+ 3.3	96	2†	66	18	24	50	2.34	-1.87	1.07	0	7	14	9	8	sw.	U. S. Weather Bureau
Versailles	Morgan	1,037	11	79.4	+ 0.5	97	4†	60	15†	28	14	3.21	-1.12	1.30	0	7	22	5	4	sw.	I. M. Wilson
Warrensburg	Johnson	878	51	80.7	+ 1.9	100	6	61	19†	34	58	2.17	-1.80	1.36	0	3	25	3	3	ne.	E. A. Markey
Warsaw	Benton	687	37	81.2	+ 2.9	105	6	60	15†	38	43	3.03</									



## Daily Precipitation for July 1938

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## Daily Precipitation for July 1938—Continued from preceding page

Stations	Drainage-basins	Day of month																															Total				
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31					
Southeastern Div.—Continued																																					
Bragg City	St. Francis				.22				.13						.20				3.70													T.	.67	4.55	9.50		
Campbell	do			1.68					.83						.01				.41	2.64			.02								.62	.20	1.02	6.59			
Cape Girardeau	Mississippi																	T.	1.90	T.											.05	.24	2.02	5.07			
Cantharville	do				.58					.09				.17					2.25	.09												.19	1.08	1.00	5.45		
Centerville	Black								.15										2.84													.84	.45	.85	5.13		
Crystal City	Mississippi														.56				1.93												.34	.13		.22	3.18		
Cuba	Meramec								1.03						1.00				1.06	.25												.53	.60	4.47			
Dexter	St. Francis				.98										T.				1.70													1.09	.69	2.60	7.06		
Doniphan	Black							1.10	.17					.02					.28	.63								.05	.25	.82	.65	1.45	6.42				
Farmington	St. Francis							.01	.02						1.04	.03			2.28	.18									1.10	.14	.23	.06	5.09				
Fisk	do				.56										.16				.61													.63	.37	2.23	4.78		
Fredericktown	do								.12						.11			T.	.53	2.00												.23	.74	.20	4.55		
Goodland	Black														.30				1.21	1.87														5.02			
Greenville	St. Francis			T.					.35		.40								.64	.26															5.02		
Jackson	Mississippi								.15						.03				.78	.51												.06	.22	.60	.87	3.22	
Jerome	Gasconade								.06						1.36				1.20	.12															3.34		
Koshkonong	Black								.60	.07					.13				.16														.20	.40	.68	.33	3.57
Leeper	do								.42						.11				2.90														.79	.28	.92	5.62	
Licking (near)	Gasconade				.19			T.	T.						.78				2.41	.04													.40	1.05	.20	1.35	5.20
Marble Hill	Mississippi								.40						.10				.80	.90															7.71		
Meramec Park	Meramec														.83				1.16	2.65												.75	.22	.10	1.07	7.71	
Morehouse	Mississippi			T.						T.									.67	1.29																9.49	
New Madrid	do			.02											T.				2.78																	6.21	
Owensville	Gasconade								1.10	T.					.27				1.60	1.16															2.68		
Pacific	Meramec																		1.58																8.43		
Parma	St. Francis																		2.42																7.33		
Poplar Bluff	Black								1.22	.02	T.				.24				.36	.78															4.28		
Richwoods	Meramec														.54				.54																7.33		
Rolla	do				.07			T.	T.						.18				1.72	T.															3.06		
St. Louis	Mississippi																		1.89	.01															3.64		
St. Louis Airport	Missouri							.02							T.				T.	.94															2.86		
St. Louis University	Mississippi														T.				1.40	.01															3.11		
Salem	Meramec							.51		.29	.03				.52				.14	2.90															4.84		
Slakeston	Mississippi																		.62																7.24		
Union	Meramec								.07						.07				2.46	1.62															4.39		
Valley Park	do																		.65	1.27														3.18			
Van Buren	Black																		2.38																4.94		
Washington Univ.	Mississippi																		.68	1.26														3.35			
West Plains	Black							.10	.02						.09				.31	T.															1.93		
Williamsville	do								1.52						.31				.01	1.52															6.83		
Willow Sprgs. (near)	White														.45				1.31	.75	.05													2.16			
Zalma	Mississippi								.66																											4.74	
Calro, Ill.	do			T.											.01				2.13	.21	T.														7.47		

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. †† Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. T. Trace, or less than 0.01 inch.

\*\*\* Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. \*\* Precipitation in the next following measurement; separate dates of fall not recorded. \* Precipitation is for 24-hour period, midnight to midnight. † Estimated. ‡ Partially estimated. |||| Incomplete.

NOTE:—In addition to the stations shown on daily temperature page, records of daily temperatures are kept at the following stations in Missouri: Advance, Appleton City, Bethany, Bolivar, Boonville, Campbell, Canton Lock No. 20, Clifton Hill, Columbia Airport, Conception, Dean, Edgerton, Elsberry, Fulton, Goodland, Greenville, Kansas City University, Kidder, Kirksville Airport, Koshkonong, Lakeside, Licking (near), Lockwood, Marble Hill, Marshall Airport, Mount Vernon, St. Joseph Airport, St. Louis Airport, St. Louis University, Saverton Lock No. 22, Seligman, Seymour, Springfield Airport, Steffenville, Tarkio, Versailles, Warsaw, and Washington University.

## Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for July 1938

(See precipitation data in table on preceding page)

Station	Data	Day of month																															Monthly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Columbia	Evaporation	.248	.234	.235	.225	.242	.241	.258	.090	.175	.221	.209	.283	.298	.144	.274	.232	.015	.000	.295	.144	.208	.210	.152	.200	.213	.198	.209	.152	.134	.247	.168	6.154
	Mean temperature	84	88	86	85	86	86	80	78	78	80	81	84	86	82	75	74	76	76	75	77	78	76	80	79	82	82	80	76	80	78	80	80.4
	Wind movement	52	49	27	14	19	22	23	29	30	33	17	31	40	60	38	26	34	32	45	15	37	23	35	24	20	21	25	42	15	34	39	951
Lakeside (Osage Dam)	Evaporation	.339	.345	.340	.313	.295	.356	.347	.188		.308	.328	.340	.407	.410	.323	.318		.097	.268	.288	.373	.311	.280	.290	.285	.286	.302	.271	.043	.303	.250	9.144
	Mean temperature	84	88	86	85	86	86	80	78	78	80	81	84	86	82	75	74	76	76	75	77	78	76	80	79	82	82	80	76	80	78	80	80.4
	Wind movement	52	49	27	14	19	22	23	29	30	33	17	31	40	60	38	26	34	32	45	15	37	23	35	24	20	21	25	42	15	34	39	951
St. Louis (Washington University)	Evaporation	.230	.259	.142	.222	.255	.215	.301	.227	.202	.310	.257	.315	.323	.311	.312	.244	.219	.029	.287	.232	.301	.234	.200	.253	.246	.262	.261	.194	.146	.195	.099	7.283
	Mean temperature	82	84	84	84	82	82	83	80	80	82	89	87	86	82	76	78	70	76	76	78	76	75	80	78	82	83	83	80	80	78	80	80.6
	Wind movement	25	38	34	16	40	22	23	35	23	24	30	32	35	49	34	25	26	37	32	23	38	37	19	8	23	23	35	18	21	21	28	884

Observations taken at 8:00 a. m. except at 7:30 a. m. at Lakeside. For Lakeside description see April 1932 report. \*\*\*\* Evaporation included in next measurement.

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Daily Temperatures for July 1938

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Northern Division																																	
Brunswick	Maximum	94	98	98	101	98	100	84	90	95	96	101	99	96	89	91	89	76	88	90	86	87	93	96	94	97	96	90	93	92	91	85	92.7
Chillicothe	Minimum	69	75	70	75	75	75	74	69	67	68	71	75	75	65	61	61	68	63	63	65	65	65	63	63	65	69	70	71	69	65	66	68.4
Columbia	Maximum	96	98	99	101	100	98	83	91	97	103	104	102	100	91	93	86	74	88	91	88	88	92	94	98	99	100	96	93	93	89	94.2	
Fayette	Minimum	74	73	75	74	73	67	66	60	71	75	76	72	64	56	66	66	62	61	67	62	66	58	66	67	65	72	69	66	65	66	67.5	
Grant City	Maximum	94	97	98	99	98	97	90	91	93	97	100	99	98	89	87	73	86	88	90	84	89	91	92	96	95	91	90	90	89	89	91.9	
Hannibal	Minimum	73	80	77	76	74	76	70	68	65	70	76	76	73	68	61	66	66	63	63	65	66	65	65	72	71	73	74	73	71	68	68	70.1
Kansas City	Maximum	94	100	100	100	97	98	94	89	92	92	96	95	93	87	89	84	73	85	88	87	84	90	92	92	95	94	90	92	88	90	88	91.2
Kirksville	Minimum	72	77	75	74	73	67	64	64	66	74	75	73	66	60	64	68	63	62	66	64	63	62	64	67	69	75	71	68	79	69	68.7	
Lawsou	Maximum	98	95	100	103	100	97	81	87	97	98	103	106	99	88	93	87	76	90	92	90	91	87	93	94	96	88	92	89	92	87	85	92.8
Hannibal	Minimum	76	71	73	74	69	69	65	66	63	72	69	73	73	57	58	68	64	58	62	65	59	59	56	66	65	65	64	64	64	66	63	65.7
Kansas City	Maximum	92	90	88	91	91	94	89	89	92	93	98	97	93	87	87	90	80	85	88	85	84	88	88	91	96	93	92	88	88	86	85	89.6
Kansas City	Minimum	73	78	70	71	70	70	67	68	67	69	74	77	70	65	63	67	65	63	66	67	62	65	66	64	70	69	73	70	67	65	68	68.4
Kirksville	Maximum	98	100	102	102	99	97	81	89	97	102	102	102	102	99	90	93	80	76	86	89	86	90	96	97	96	96	92	91	91	89	93.3	
Kirksville	Minimum	77	77	75	79	71	76	69	70	66	75	79	78	81	70	64	69	67	66	67	71	66	67	65	74	75	73	71	70	71	67	70	71.6
Lawsou	Maximum	91	95	92	93	94	95	84	86	92	93	99	95	94	89	88	86	82	88	85	88	85	89	90	92	95	90	89	90	92	90	86	90.3
Louisiana	Minimum	74	70	69	72	67	74	67	69	63	65	70	73	77	60	58	67	64	60	65	69	60	64	60	65	71	67	74	69	64	63	67	67.0
Louisiana	Maximum	94	97	98	98	96	95	82	89	94	99	99	99	99	91	83	73	85	87	85	85	89	90	92	94	93	88	90	88	89	88	90.9	
Louisiana	Minimum	75	72	74	72	68	70	69	67	65	71	76	73	76	65	63	66	67	61	64	65	61	65	61	67	68	69	67	67	63	66	67.8	
Louisiana	Maximum	92	95	87	84	85	98	85	80	94	93	98	100	88	90	90	90	73	85	90	87	89	85	90	87	86	86	90	89	90	87	85	88.5
Louisiana	Minimum	75	77	70	72	68	72	67	67	60	62	72	77	74	60	53	60	65	60	60	62	53	62	60	53	65	64	70	67	67	58	60	64.9
Macon	Maximum	94	99	94	95	99	99	85	91	95	94	100	99	95	86	90	89	74	87	90	87	87	91	94	93	97	96	92	91	94	86	92.1	
Maryville	Minimum	69	75	72	70	70	73	69	67	66	68	73	75	70	61	60	67	65	60	64	65	60	64	66	68	67	73	69	64	66	67	67.2	
Mexico	Maximum	98	97	99	101	100	94	83	86	96	97	103	102	96	92	91	89	77	87	91	87	90	88	94	96	95	92	90	91	93	90	89	92.7
Mexico	Minimum	75	70	74	74	68	73	65	65	63	71	71	70	70	66	66	66	64	62	62	65	63	63	60	68	67	71	68	65	68	65	64	67.1
Moberly	Maximum	95	97	95	97	97	99	92	92	93	98	102	101	96	90	91	92	74	85	90	92	85	90	91	95	97	97	94	92	91	92	90	93.0
Moberly	Minimum	70	76	73	72	70	72	70	67	63	67	75	74	75	65	65	72	65	61	60	65	61	62	63	65	68	72	69	64	63	68	67.0	
Moberly	Maximum	92	99	98	99	96	97	91	88	92	92	97	96	95	89	88	86	77	88	88	87	87	88	92	93	94	94	91	91	90	88	91.4	
Moberly	Minimum	70	76	73	72	69	73	64	66	65	68	73	74	72	61	53	65	65	58	60	66	78	65	64	64	68	72	70	70	65	62	68	67.8
Oregon	Maximum	99	100	102	103	100	89	85	87	95	103	103	102	88	94	82	79	89	91	89	90	89	95	97	97	95	93	92	93	91	93	91	93.6
Oregon	Minimum	75	70	76	75	72	71	65	67	65	71	73	73	72	66	64	69	64	63	63	64	61	63	62	69	71	72	68	65	66	64	65	68.0
St. Charles	Maximum	95	92	94	94	95	97	94	92	92	99	103	99	91	94	94	94	76	87	92	94	89	89	95	97	94	99	93	86	91	86	92	92.9
St. Joseph	Minimum	70	77	73	73	71	70	69	69	67	67	76	76	74	71	63	65	62	67	64	65	65	61	65	67	69	70	72	67	71	70	69	68.9
Trenton	Maximum	99	99	103	102	99	93	85	88	98	103	103	102	100	88	95	80	77	89	90	89	88	89	94	96	95	94	92	93	91	88	90	93.3
Trenton	Minimum	74	73	78	76	72	73	67	69	68	75	79	77	69	62	68	66	65	69	69	65	68	64	73	74	74	70	71	67	69	68	70.6	
Unionville	Maximum	98	101	100	102	98	99	90	91	99	104	108	104	102	92	96	95	83	91	93	89	90	91	96	98	96	97	91	95	93	95	90	95.7
Unionville	Minimum	72	73	76	74	76	74	64	63	63	71	72	75	70	63	58	64	66	63	63	66	63	65	61	63	68	67	70	67	66	64	67	67.5
Warrenton	Maximum	101	99	94	96	99	102	86	90	101	102	110	108	103	94	93	88	77	93	94	93	93	91	93	98	98	104	94	96	96	92	97	95.9
Warrenton	Minimum	72	73	66	70	70	74	66	66	64	71	74	74	74	60	60	66	60	64	60	62	60	67	69	66	70	66	65	66	65	66	65	66.5
Warrenton	Maximum	91	93	92	91	93	94	92	87	91	94	96	97	92	87	85	87	80	82	86	90	85	88	92	93	95	93	86	88	83	85	89.6	
Keokuk, Iowa	Minimum	70	77	74	72	69	71	69	68	68	70	76	77	71	68	61	66	66	65	63	67	64	68	66	68	69	72	70	69	70	68	67	68.8
Keokuk, Iowa	Maximum	95	87	82	88	91	84	86																									







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# CLIMATOLOGICAL DATA

## MISSOURI SECTION

W. J. MOXOM  
ST. LOUIS, MO.

Vol. XLII AUGUST 1938 No. 8  
PRICE: 5 CENTS A COPY; 25 CENTS A YEAR

### GENERAL SUMMARY

The month was unusually persistently warm throughout the State. Temperatures were relatively higher over the southwestern section. While there were no records of extreme heat even equaled, all stations had an excess of temperature. There were only a few short periods of subnormal temperatures and they were rather local. This August was the fourth warmest in the past 51 years. Maxima ranged from 97° at Hannibal and Kirksville, to 108° at Garber.

The average precipitation for the State was 69 per cent of the normal. It was rather unevenly distributed. Many stations in the northern section recorded amounts much in excess of the normal. Moisture conditions were generally satisfactory over much of the State north of the Missouri River. In the southwestern and southeastern sections the rainfall was deficient, and by the close of the month severe droughty conditions prevailed over much of the southern half of the State. Streams were very low and water shortage was quite serious in some areas.

Most of the early planted corn at the beginning of the month was in the tasseling and roasting ear stage, and the condition of the crop was generally good to excellent. By the close of the month droughty conditions had been intensified, especially in the southern section, and there was a general deterioration of growing crops. Much of the late corn was cut for silage.

The dry weather was favorable for curing hay and threshing of small grains. Gardens were failing in the drier areas, but were still fair to good in northern section. Some fall plowing was done, but in many localities the soil was too hard and dry. There were no reports of serious damage by grasshoppers. During the latter part of the month in the west-central counties there was sleeping sickness among horses and mules with many fatalities.—H. C. G.

### TEMPERATURE

The monthly mean temperature for the State, 82 stations reporting, was 81.1°, or 4.6° above normal. The highest monthly mean was 84.6° at Warsaw, and the lowest monthly mean was 76.4° at Tarkio. The highest temperature recorded was 108° at Garber on the 23d, and the lowest was 53° at Ederton on the 12th and at Louisiana on the 12th and 18th. The greatest daily range was 47° at Garber on the 23d.

### PRECIPITATION

The average precipitation for the State, 141 stations reporting, was 2.62 inches, or 1.16 inches less than normal. The greatest local monthly amount was 9.37 inches at Lucerne, and the least local monthly amount was 0.03 inch at Crystal City. The greatest amount in any twenty-four hours was 4.41 inches at Kansas City on the 20th-21st. The average number of days with 0.01 inch or more of precipitation was 6.

### MISCELLANEOUS PHENOMENA

Aurora.—4th.  
Fog.—Dense, 1st, 2d, 8th, 26th, 29th, 30th.  
Hail.—Light, 6th at Lawson, 20th at Amity, Concordia, and Kansas City, 26th at Dexter, 28th at Jefferson City; moderate, 30th at Linneus.  
Halos.—Solar, 8th, 9th, 16th; lunar, 6th, 7th, 8th, 9th.

Thunderstorms.—Local, 1st, 2d, 4th, 5th, 8th, 11th, 13th, 21st, 25th, 26th, 31st; more or less general, 6th, 7th, 14th, 15th, 16th, 20th, 27th, 28th, 29th, 30th.

Windstorms.—On 6th; some corn blown down and damaged at Gorin. On 20th; with some damage to roofs and trees at Lexington and some damage also at Kansas City.

### PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind				Relative humidity			Percentage of sunshine
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12 noon	6:30 p. m.	
Columbia.....	29.98	30.16	12	29.74	16	7.5	32	nw.	20	83	53	50	80
Kansas City.....	29.95	30.17	11	29.71	14	9.6	57	nw.	20	79	47	48	84
St. Joseph.....	29.94	30.20	11	29.67	14	8.0	22	e.	6	81	53	52	76
St. Louis.....	30.00	30.19	28	29.83	15	10.3	30	sw.	15	78	53	54	75
Springfield.....	29.99	30.16	23	29.83	15	7.7	18	sw.	19	82	42	42	84
Cairo, Ill.....	30.01	30.16	4	29.83	1	6.5	28	sw.	14	90	63	69	83
Keokuk, Iowa...	29.98	30.18	12	29.77	16	7.1	29	sw.	6	83	51	54	79

### COMPARATIVE DATA FOR AUGUST

Year	Temperature			Precipitation					Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy
1888.....	74.0	110	45	7.03	5.95	7.84	7.30	0	11	..	..	..
1889.....	73.5	101	52	1.69	1.65	2.11	1.31	0	14	..	..	..
1890.....	73.3	106	47	5.13	4.25	7.21	3.93	0	9	..	..	..
1891.....	73.2	102	38	5.29	5.96	5.14	4.78	0	8	..	..	..
1892.....	74.3	102	44	2.65	2.24	2.63	3.08	0	6	17	8	75
1893.....	72.8	100	40	1.99	2.55	1.89	1.53	0	4	18	10	72
1894.....	77.0	111	39	1.64	1.00	1.59	2.33	0	5	14	16	69
1895.....	75.3	104	46	4.02	5.45	3.51	3.09	0	8	15	11	75
1896.....	76.6	108	41	3.13	3.32	3.25	2.82	0	6	17	10	73
1897.....	74.1	108	41	2.37	2.43	2.23	2.39	0	6	19	9	74
1898.....	75.8	103	44	3.13	2.93	2.88	3.57	0	5	17	10	74
1899.....	78.8	107	49	3.13	2.99	2.76	2.45	0	7	18	10	73
1900.....	80.3	105	52	3.55	2.99	4.79	2.87	0	6	19	9	73
1901.....	78.4	109	47	2.05	1.12	2.74	2.29	0	6	19	9	73
1902.....	75.0	103	47	6.06	5.66	6.79	5.74	0	10	14	11	64
1903.....	74.5	102	43	5.00	6.54	5.01	8.44	0	10	16	11	64
1904.....	73.7	100	43	5.40	5.61	5.84	4.76	0	8	16	10	75
1905.....	76.4	99	48	4.68	4.19	5.90	3.94	0	8	19	7	75
1906.....	76.6	101	40	4.70	3.99	5.10	5.01	0	11	14	8	66
1907.....	77.3	109	47	3.89	3.92	3.90	3.85	0	8	17	8	75
1908.....	76.4	102	46	3.46	3.63	3.61	3.14	0	8	17	9	75
1909.....	79.5	110	40	0.60	0.31	0.67	0.81	0	2	24	6	71
1910.....	74.7	103	40	2.92	2.63	3.56	2.57	0	6	15	9	77
1911.....	75.4	109	41	4.33	2.81	4.97	5.21	0	7	15	8	76
1912.....	76.2	104	41	4.04	4.77	3.42	3.93	0	9	17	8	74
1913.....	82.8	110	41	1.09	1.24	0.67	1.37	0	3	22	7	70
1914.....	78.0	106	49	4.25	3.73	4.53	4.48	0	9	15	9	77
1915.....	69.8	98	37	8.19	4.99	7.57	12.02	0	12	12	9	70
1916.....	79.2	107	41	4.09	5.39	2.55	4.33	0	7	19	7	75
1917.....	73.3	104	38	4.69	3.13	5.04	5.89	0	9	16	8	75
1918.....	81.8	111	45	3.57	3.22	2.91	4.69	0	8	17	9	75
1919.....	75.7	106	44	4.33	4.41	4.47	4.12	0	8	17	9	75
1920.....	73.1	102	43	4.69	3.56	5.94	4.66	0	9	15	8	73
1921.....	76.8	109	48	5.39	5.16	6.42	4.60	0	9	14	10	77
1922.....	77.5	107	46	2.44	2.68	1.67	2.97	0	6	18	8	75
1923.....	77.3	108	42	3.81	5.47	1.87	4.08	0	8	16	9	76
1924.....	77.2	106	48	4.11	3.66	4.50	4.18	0	7	19	8	74
1925.....	76.5	107	45	3.34	5.31	2.60	2.10	0	6	19	8	74
1926.....	77.5	106	50	5.65	4.03	6.39	6.63	0	10	15	9	77
1927.....	71.1	97	39	5.09	4.19	7.04	4.04	0	9	14	10	77
1928.....	76.4	99	45	5.48	4.37	6.75	5.33	0	9	15	10	76
1929.....	76.0	105	43	2.58	1.84	2.21	3.69	0	6	18	9	74
1930.....	78.5	114	47	1.99	2.39	1.87	1.70	0	6	16	10	75
1931.....	74.9	106	44	4.97	4.03	5.66	5.21	0	9	15	9	77
1932.....	77.2	106	46	5.70	7.82	3.86	5.42	0	9	13	9	74
1933.....	75.4	108	48	3.82	4.32	3.80	3.33	0	9	13	10	78
1934.....	80.6	115	41	4.01	3.36	2.83	5.83	0	9	14	11	66
1935.....	77.7	110	45	2.20	1.60	2.73	2.26	0	6	17	9	75
1936.....	84.6	116	43	0.84	0.90	0.91	0.72	0	4	20	8	53
1937.....	80.5	105	51	2.05	2.50	2.00	1.64	0	5	17	11	33
1938.....	81.1	108	53	2.62	4.62	1.78	1.47	0	6	20	8	33
Period.....	76.5	116	37	3.78	3.69	3.88	3.78	0	8	17	9	5



## Climatological Data for August 1938

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.					Precipitation, in inches					Number of days					Prevailing direction of wind	Observers	
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Length of record, years	Total	Departure from the normal	Greatest in 24 hours	Total snow fall, unmelting	With precip., .01 inch or more	Clear	Partly cloudy			Cloudy
Northern Division																					
Bethany	Harrison	916	43	79.6	+ 4.6	103	5	56	12	41	45	6.59	+2.77	2.29	0	8	21	5	5	sw.	A. S. Cumming
Brunswick	Chariton	652	57	80.0	+ 5.8	100	47	61	121	36	59	3.58	-0.36	1.52	0	9	21	6	4	se.	O. K. Bewecke
Canton, Lock & Dam 20	Lewis	488	0	79.2	.....	99	31	58	27	28	8	4.03	.....	1.21	0	9	16	9	6	s.	Lockmaster
Chillicothe	Livingston	779	29	80.2	+ 4.7	102	3	57	12	37	32	3.63	-0.33	1.25	0	6	22	6	3	sw.	Wm. J. Olenhouse
Clifton Hill	Randolph	731	39	79.0	+ 3.0	99	8	59	121	31	29	3.84	+0.04	0.97	0	8	18	8	5	ne.	Dr. A. J. Bradsher
Columbia	Boone	740	48	81.3	+ 5.7	101	10	63	27	29	48	1.77	-1.83	0.54	0	8	18	11	2	s.	U. S. Weather Bureau
Conception	Nodaway	980	49	79.9	+ 5.2	102	6	60	171	38	54	5.46	+1.82	2.28	0	8	16	12	3	sw.	Fr. Adelhelm Hess
Edgerton	Platte	856	18	80.4	+ 5.3	103	10	53	12	39	27	4.61	+0.57	1.26	0	6	27	0	4	s.	Fred L. Stiff
Elsberry	Lincoln	449	7	78.8	.....	98	107	54	18	33	7	2.73	.....	1.05	0	5	20	10	1	sw.	Ray E. Mills
Fayette	Howard	680	58	82.2	+ 6.3	99	87	60	12	31	55	3.39	-0.17	1.53	0	8	20	7	4	ne.	Morrison Observatory
Fulton	Callaway	818	50	81.8	+ 5.4	102	10	60	12	35	46	1.63	-2.02	0.70	0	7	23	7	1	ne.	Clyde C. Herring
Gorin	Scotland	700	.....	.....	.....	.....	.....	.....	.....	.....	51	6.71	+3.25	2.58	0	8	20	10	1	sw.	W. L. Harker
Graut City	Worth	1,134	34	78.2	+ 3.3	101	5	55	12	40	46	5.66	+1.72	2.11	0	8	9	18	4	sw.	Howard Rybolt
Hannibal	Marion	759	46	79.2	+ 4.2	97	47	60	28	30	54	4.95	+1.61	2.08	0	7	15	5	11	sw.	Hannibal Water Dept.
Kansas City	Jackson	741	49	83.0	+ 6.4	103	10	63	27	32	49	6.78	+2.69	4.41	0	9	15	12	4	sw.	U. S. Weather Bureau
Kansas City University	Jackson	908	0	82.4	.....	103	10	60	12	34	0	4.36	.....	2.41	0	5	12	18	1	sw.	University of Kansas City
Kidder	Caldwell	1,020	46	79.1	+ 3.7	100	31	58	12	34	50	4.25	+0.29	1.65	0	9	23	5	3	se.	Mrs. Geraldine Terry
King City	Gentry	1,095	.....	.....	.....	.....	.....	.....	.....	.....	12	6.11	+2.43	2.05	0	9	11	14	6	sw.	John M. Martin
Kirksville	Adair	969	49	78.1	+ 4.1	97	31	54	27	33	56	5.85	+1.73	3.04	0	7	14	13	4	sw.	Charles Noble
Lawson	Ray	1,070	0	79.0	.....	100	10	57	12	34	0	3.75	.....	1.59	0	9	17	11	3	sw.	Elmer E. Lamb
Linneus	Linn	816	.....	.....	.....	.....	.....	.....	.....	.....	6	5.98	.....	2.00	0	7	21	8	2	sw.	H. D. Taggart
Louisiana	Pike	469	44	78.6	+ 3.6	100	51	53	121	36	57	3.80	-0.74	1.40	0	5	23	7	1	w.	Stark Bro's Nurseries
Macon	Macon	875	39	78.8	+ 2.7	101	9	58	121	33	45	3.89	+0.08	1.32	0	8	20	8	3	sw.	Mrs. W. C. Brown
Maryville	Nodaway	1,169	48	78.8	+ 5.0	102	5	60	11	37	44	7.44	+3.46	2.89	0	9	18	1	12	se.	R. B. Montgomery
Mexico	Atchison	800	49	80.5	+ 4.5	101	91	58	12	34	60	4.01	+0.16	1.03	0	7	21	7	3	sw.	Mrs. Abbie Snoddy
Moberly	Randolph	875	1	79.5	.....	98	4	57	12	32	1	4.54	.....	1.62	0	7	24	4	3	se.	McCormick Hospital
Oregon	Holt	1,048	82	80.5	+ 5.3	102	5	60	121	34	82	3.19	-0.61	1.74	0	9	21	4	6	sw.	Miss Mina Wright
St. Charles	St. Charles	520	50	82.4	+ 5.6	106	23	61	18	34	60	1.16	-3.08	0.64	0	4	25	5	1	sw.	Martin L. Comann
St. Joseph	Buchanan	957	28	80.8	+ 4.3	100	5	61	12	31	66	6.85	+3.02	2.81	0	10	19	7	5	s.	U. S. Weather Bureau
Steffenville	Lewis	650	40	79.1	+ 2.6	100	5	56	27	33	45	7.89	+3.85	3.97	0	6	17	12	2	s.	Frank Hall
Tarkio	Atchison	916	35	76.4	+ 1.2	99	5	57	12	35	44	6.63	+2.73	2.10	0	10	15	12	4	se.	Albert Volker
Treuton	Grundy	822	42	80.1	+ 4.9	104	3	59	12	36	43	7.21	+3.33	2.24	0	8	24	5	2	s.	W. H. Estes
Unionville	Punama	1,062	45	79.9	+ 5.1	102	31	56	27	37	45	8.24	+3.96	2.17	0	10	16	8	7	sw.	John H. Schick
Warrenton	Warren	816	56	81.0	+ 4.5	101	8	60	121	33	48	1.38	-2.29	0.47	0	8	20	8	3	sw.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.	574	66	79.5	+ 4.5	99	10	61	25	30	66	2.30	-0.90	0.70	0	7	16	7	8	sw.	U. S. Weather Bureau
<b>Division means and extremes</b>				79.9	+ 4.5	106	23	53	121	41		4.62	+0.93	4.41	0	8	19	8	4	sw.	
Southwestern Division																					
Appleton City	St. Clair	813	43	83.0	+ 5.2	103	81	60	12	39	46	1.71	-2.25	1.31	0	3	26	4	1	sw.	Rolla Brown
Bolivar	Polk	1,071	35	84.4	+ 7.5	104	251	60	2	37	43	0.53	-3.33	0.33	0	2	111	14	5	s.	Southwest Baptist College
Boonville	Cooper	650	0	81.2	.....	100	7	62	121	31	61	2.88	-1.67	0.94	0	6	22	6	3	s.	Boonville Water Dept.
Clinton	Henry	765	45	82.6	+ 5.0	103	25	60	12	38	51	1.08	-2.57	0.47	0	5	.....	.....	.....	.....	U. S. Weather Bureau
Dean H.	McDonald	1,000	34	81.0	+ 3.3	104	9	56	1	44	39	1.27	-2.85	0.98	0	2	22	7	2	w.	E. S. Taylor
Eldon	Miller	934	43	82.2	+ 5.8	102	8	60	12	37	39	1.30	-2.36	0.78	0	4	14	12	5	s.	E. H. Shepherd
Garber	Taney	960	4	81.6	.....	108	23	58	1	47	4	1.37	.....	0.76	0	8	16	7	8	sw.	William H. Durham
Harrisonville	Cass	904	60	81.6	+ 5.7	104	101	61	12	37	63	1.19	-2.99	0.72	0	4	23	6	2	sw.	John H. Patterson
Jefferson City	Cole	557	48	80.0	+ 3.3	101	107	58	12	38	56	1.39	-2.44	0.66	0	7	22	7	2	s.	Mrs. Frank Kliegel
Lakeside	Miller	595	7	82.9	.....	103	22	60	12	36	7	1.54	.....	0.82	0	3	.....	.....	.....	.....	W. S. Frame
Lamar	Barton	980	50	84.4	+ 6.7	107	26	60	11	40	57	0.91	-3.38	0.91	0	2	28	2	1	sw.	Jesse A. Mann
Lebanon	Laclede	1,265	50	82.7	+ 6.6	103	241	62	11	36	51	0.66	-3.83	0.32	0	7	14	14	3	sw.	Mrs. Rosa E. Montelius
Lexington	Lafayette	688	53	81.8	+ 5.6	102	10	61	12	34	54	5.81	+2.29	2.94	0	8	23	7	1	se.	Miss Carrie Loomis
Lockwood	Dade	1,078	32	83.2	+ 6.0	103	26	60	1	36	42	2.00	-2.70	2.00	0	1	26	4	1	sw.	Hubert A. Nieman
Marshall	Saline	779	51	81.3	+ 5.3	100	10	60	12	34	48	3.30	-0.60	1.74	0	6	25	5	1	s.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	37	82.6	+ 7.1	107	23	63	1	38	41	0.25	-4.09	0.15	0	5	22	9	0	s.	Mo. Fruit Exp. Station
Mount Vernon	Lawrence	1,174	26	83.6	+ 6.9	105	26	60	1	37	38	0.75	-3.73	0.50	0	2	9	22	0	sw.	G. H. Boswell
Neosho	Newton	1,011	51	81.6	+ 4.5	101	26	58	1	40	55	1.14	-3.23	0.63	0	3	27	2	2	sw.	U. S. Fisheries Station
Nevada	Vernon	862	45	84.0	+ 6.9	106	91	58	12	42	46	2.00	-1.77	2.00	0	1	25	4	2	sw.	T. J. Kaupp
Sedalia	Pettis	910	25	82.7	+ 6.2	103	91	60	12	34	27	4.68	-0.50	1.77	0	7	26	4	1	s.	Mrs. Laura S. Trader
Seligman	Barry	1,542	37	80.1	+ 3.9	98	26	60	1	30	35	0.78	-3.22	0.31	0	3	26	5	0	sw.	Floyd E. Fawver
Seymour (near)	Webster	1,642	32	80.5	+ 5.5	101	26	60	21	39	32	0.36	-3.88	0.21	0	4	22	6	3	se.	A. L. Hailey
Springfield	Greene	1,301	50	83.5	+ 7.8	100	24	65	1	32	50	0.55	-3.54	0.47	0	6	22	4	5	s.	U. S. Weather Bureau
Versailles	Morgan	1,037	11	82.4	+ 3.9	101	101	56	12	36	14	1.53	-2.54	0.64	0	5	25	3	3	sw.	I. M. Wilson
Warrensburg	Johnson	878	51	83.4	+ 6.3	103	10	60	12	34	58	3.12	-0.85	1.53	0	5	25	5	1	sw.	E. A. Markey
Warsaw	Benton	687	37	84.6	+ 7.0	106	71	58	12	43	43	1.08	-3.54	0.67							



## Daily Precipitation for August 1938

Stations	Drainage-basins	Day of month																															Total		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
Northern Division																																			
Amity	Grand					1.03	.20	T.								.35	1.52	T.				.62						T.		T.	.10		T.	3.82	
Bethany	do					.67										.60	2.29					.68	.52						.05	1.61			.17	6.59	
Bowling Green	Mississippi	.10				.73											.25	.47													1.00			2.55	
Brunswick	Grand					1.52	.10					T.					.70	.10											.02	.12	.15		.10	3.58	
Canton, Lock No. 20	Mississippi	.52			.01	.08											.02	.71												1.05	.16		.68	4.03	
Chillicothe	Grand					1.25	.19									T.	.64						1.15					.04		.36			T.	3.63	
Clifton Hill	Chariton					.21		.43									.55						.94	.97							.66		.02	.06	3.84
Columbia***	Missouri					T.	.14		.08							T.	.51						.26	.28				T.	.45	.03	T.		.02	1.77	
Conception	do					2.28		T.									.36	.79					.05	.68					.05	1.11			.14	5.46	
Edgerton	Missouri					T.	.20		T.							1.26	.70					1.02	1.08						.35		T.		T.	4.61	
Edina	Mississippi					.04	1.93									T.	.82	T.					1.19							1.62	T.		.30	5.90	
Elsherry	do					.64										.12	.12						1.05							.80				2.73	
Farber	do					1.48											.12						.70							.36	.40		T.	3.06	
Fayette	Missouri					.70										.17	.61					.07	1.46							.21	.15		.02	3.39	
Fulton	do					.22		T.								.02	.14						.70							.29	.10	.16	T.		1.63
Gallatin	Grand					.79	.20									.10	1.32						.93					.10		.56			.11	4.11	
Gorin	Mississippi			.49		2.58		T.								.22	1.04						.18	.45					T.	.87			.88	6.71	
Grant City	Grand					.60	.27									.32	.82						.75	1.36					T.	1.36			.18	5.66	
Hannibal	Mississippi	.27			.01	1.12											.27						1.20						T.	1.59	.49			4.95	
Hermann	Missouri					.05										.02	.17						.30							.08	.02	.02	.02	.02	0.68
Kahoka	Mississippi	.35				.30		1.30									.11	1.15						.50							.05	.60		.75	4.95
Kansas City***	Missouri					.01	T.									.08	.76					1.86	2.55						1.36	.09	T.	.03	.04	6.78	
Kansas City University	do															.02	.86						2.41							.91	T.	.16	T.		4.36
Kidder	Grand					.95	.13									.16	1.65						.98				.10			.15	.02		.11	4.25	
King City	Missouri					1.97	.04									.93	2.05						.31	.20						.15	.35		.11	6.11	
Kirksville	Mississippi					1.87	.15									.10								.02	.65					.02	3.04			5.85	
LaBelle	do					2.68											.27														2.62	.11	.48		6.16
Lawson	Missouri					.38										.47	.62						.19	1.59					.02	.42	.03		.03	3.75	
Linneus	Grand					1.24	.25										.47							2.00				.02	1.97				T.	.03	5.98
Louisiana	Mississippi	.30				1.10											.87	2.59	.03					.90							1.40	.10		3.80	
Lucerne	Grand					24.2	.26	.65									.26	.79						.79							1.23	.11		.60	9.37
Macou	Chariton					.67	.03										.48	.01						1.30							1.24	.08		.08	3.89
Madison	Mississippi					.61			.10								.56							1.67							.68	.32			3.94
Maryville	Missouri					2.89	.04									.37	.98						.12	.93						.09	1.64		.38	7.44	
Memphis	Mississippi					.69	1.86										1.53							.84							.71	.28		.73	6.64
Mexico	do					.83											1.00	.02						1.03						.28	.75	.10		.40	4.01
Milant	Grand					.07	1.09	.10									1.12	.05						1.30							1.28	.32	.21		5.54
Moberly	Mississippi					.56		.25								.33	.52						.36	1.62							.90				4.54
Monroe City	do					1.12										.09	.18						.65	1.29							1.14				4.47
Oregon	Missouri					.35	.02									.55	1.74						.08					.08	.09	.10			.18	3.19	
Palmyra	Mississippi	.10				1.68											.19						.95								3.25		.04		6.21
Paris	do					.59				.09							.27	T.						1.30							.96	.05			3.26
Perry	do					.95											.27						.95								.12				3.39
Philadelphia	do					1.26											.27							1.80							3.23	.10		.20	6.86
St. Charles	Missouri	.10														T.							.10								.32		.64		1.16
St. Joseph**	do		T.			2.81	T.				T.					.14	.74	2.14					.76					.04	.08	.07		.02	.05	6.85	
Saverton, Lock No. 22	Mississippi					.47			.01								.58							.68								.48	.41		2.63
Shelbina	do					1.10											.45							.52	1.12						1.10				4.29
Shelbyville	do					1.14											.98							1.58							1.38				5.08
Stoutville	do					1.85											.82						.47	.75							.03	3.97			7.89
Tarkio	Missouri					2.10	.25	.15								T.	1.98	.35					.25	.57							.02	1.62		.06	7.21
Trenton	Grand					2.24										T.	1.47	.75					.83								.30		.57		1.64
Troy	Mississippi					.56											.07							.14							.30		.57		1.64
Unionville	Chariton					.50	1.40	.50									.62	2.05	.12					.77							1.26	.12		.90	8.24
Warrenton	Mississippi	.06				.07											.05	.14						.23							.22	.47		.14	1.38
Keokuk, Iowa**	do				.03	.38	.17	T.	T.							T.	.11						.40					T.		T.	.51		.70	2	



## Daily Precipitation for August 1938—Continued from preceding page

Stations	Drainage-basins	Day of month																															Total		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
Southeastern Div.—Continued																																			
Bragg City	St. Francis		T.										.95		T.	.10	.26														T.	.90	2.21		
Campbell	do	.01										.16				.54															.06	.12	0.88		
Cape Girardeau	Mississippi	.11						.12								T.	.76	.03	T.											.08	1.04	.02	.07	2.23	
Caruthersville	do	.22		.15	.14	.12				.01			.45			.15	.40		.03													2.30		3.97	
Centerville	Black	.40															.38															.27	1.05		
Crystal City	Mississippi															T.	.03														T.	T.	0.03		
Cuba	Meramec																																0.24		
Dexter	St. Francis							.16					.22			.35	.47							.24									1.78		
Douglas	Black							.55				1.45				1.05	.05	.02	.71									.27	.09	.22			3.83		
Farmington	St. Francis	.02				.61			.02							.02	.43	.21													.25	.04		.04	1.64
Fisk	do												1.64			.17	.61																2.42		
Fredericktown	do															T.	1.10																1.26		
Goodland	Black						.50										.27													.16			1.10		
Greenville	St. Francis																.83	.01													.29	.11	1.87		
Jackson	Mississippi	.05					.54										.40	.86												.60			2.69		
Jerome	Gasconade	.26																															0.67		
Koshkonong	Black							1.40									1.10	.18														.05		2.73	
Leeper	do							.25									.03	1.11														.10		1.53	
Licking (near)	Gasconade															T.	T.	.04	T.											.04			0.10		
Marble Hill	Mississippi						.10										.45	.60													.06	T.		1.45	
Meramec Park	Meramec	.22															.09												.05	.10	.15			0.53	
Morehouse	Mississippi	.03						.29									.40															.07		1.17	
New Madrid	do	.29															.18	.34			.07										.46	.73		2.16	
Owensville	Gasconade																																	1.28	
Pacific	Meramec	1.38																															.80	1.24	
Parma	St. Francis	.05	.15										.10				.25	.21														1.02	.81	1.63	
Poplar Bluff	Black												.03				.24	.82	.03													.28	.04	2.59	
Richwoods	Meramec	.10																.05														.01	.12	0.33	
Rolla	do																.17	T.														.01		0.37	
St. Louis***	Mississippi								.35								.07	T.																1.15	
St. Louis Airport*	Missouri					T.	T.										.04	T.														.18	.61	.14	1.04
St. Louis University*	Mississippi							.21									T.	T.															.07		1.03
Salem	Meramec	.95															.03	.24															.02	.03	1.30
Sikeston	Mississippi		.03										.10				.08	.27															.01	.08	0.81
Union	Meramec						.10										.04															.16		.06	0.40
Valley Park	do	.74					T.										T.	T.	.11													T.		1.33	
Van Buren	Black																.64	.10		.17													.08	0.99	
Washington Univ.	Mississippi	.19																															.01		1.15
West Plains	Black							1.97									.23	.03														.07	.77	.11	2.23
Williamsville	do	.04						.23									.26	1.20	.03															.62	1.82
Willow Sprgs. (near)	White	.49						.82	.10					.57			.06	.12	.01														.57	.01	2.75
Zalma	Mississippi																																		
Cairo, Ill.***	do	.98					T.										.21	.02	.06													T.	.26	T.	1.56

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. †† Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. T. Trace, or less than 0.01 inch.

\*\*\* Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. \*\* Precipitation in the next following measurement; separate dates of fall not recorded. \* Precipitation is for 24-hour period, midnight to midnight. † Estimated. †† Partially estimated. ††† Incomplete.

NOTE:—In addition to the stations shown on daily temperature page, records of daily temperatures are kept at the following stations in Missouri: Advance, Appleton City, Bethany, Bolivar, Booneville, Campbell, Canton Lock No. 20, Clifton Hill, Columbia Airport, Conception, Dean, Edgerton, Elsberry, Fulton, Goodland, Greenville, Kansas City University, Kidder, Kirksville Airport, Koshkonong, Lakeside, Licking (near), Lockwood, Marble Hill, Marshall Airport, Mount Vernon, St. Joseph Airport, St. Louis Airport, St. Louis University, Saverton Lock No. 22, Seligman, Seymour, Springfield Airport, Steffenville, Tarkio, Versailles, Warsaw, and Washington University.

## Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for August 1938

(See precipitation data in table on preceding page)

Station	Data	Day of month																															Monthly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Columbia	Evaporation	165	200	244	298	260	294	104	201	195	272	316	263	227	301	330	139	183	202	223	334	227	174	224	248	285	196	138	049	083	121	127	6,623
	Mean temperature	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Wind movement	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lakeside (Osage Dam)	Evaporation	303	289	312	362	359	389	277	338	342	370	376	371	290	390	443	277	110	277	294	397	..	236	301	310	313	257	326	257	203	203	213	9,491
	Mean temperature	78	80	84	84	85	85	85	86	87	87	84	77	84	86	82	78	79	82	85	85	80	85	84	81	84	82	80	80	82	82	84	82.9
	Wind movement	29	28	32	39	26	59	27	15	34	30	42	37	17	76	91	64	49	38	50	48	61	12	28	26	28	16	35	45	47	30	22	1,181
St. Louis (Washington University)	Evaporation	161	117	216	272	284	254	234	225	279	251	330	318	244	294	286	106	224	212	260	296	252	244	262	326	342	186	172	146	060	087	147	7,090
	Mean temperature	76	80	81	87	86	82	84	88	86	88	84	78	82	84	81	83	77	76	83	86	80	88	90	90	79	80	74	74	74	80	84	82.2
	Wind movement	42	7	31	39	29	48	21	20	32	31	48	48	32	101	23	52	52	30	44	60	43	32	23	29	51	30	33	24	38	17	43	1,158

Observations taken at 8:00 a. m. except at 7:30 a. m. at Lakeside. For Columbia and Lakeside descriptions see July 1938 and April 1932 reports respectively.

\*\*\*\* Evaporation included in next measurement.

## DESCRIPTION OF COOPERATIVE EVAPORATION STATION AT WASHINGTON UNIVERSITY, ST. LOUIS COUNTY, MO.

A cooperative evaporation station was established at Washington University, St. Louis County, Mo., latitude 38 degrees 38 minutes, longitude 90 degrees 19 minutes, elevation 536.5 feet, and records began June 1, 1938.

The station is located on the Washington University Campus grounds and is approximately six miles west of the St. Louis, Mo., main postoffice, and 83 feet east of the Washington University Engineering Building. Observations are made daily at 8:00 a. m., 90th meridian time.

The equipment was installed in accordance with Weather Bureau standard as described in Circular L and consists of cylindrical galvanized iron pan, 48 inches in diameter, nine and one-half inches deep, which is filled to approximate depth of 6 inches and rests on 2 inches by 4 inches wooden supports spaced 4 inches apart on packed dirt which permits ventilation under the pan. The evaporation pan is shaded approximately two hours during the morning and one and one-half hours in the afternoon as compared with a sea horizon. Other equipment consists of hook gage, still well, anemometer, thermometer shelter, maximum and minimum thermometers, thermometer support, 8-inch standard rain gage, recording rain gage (Friez weighing reconnaissance type). The anemometer is six and one-half inches from the pan and the anemometer

cups are 6 inches above the rim of the pan. The instrument shelter is 6 feet east of the pan and the thermometers are five and one-half feet above ground. The recording rain gage is 3 feet and the 8-inch rain gage is 5 feet from the pan.

The surrounding country is rolling and in the immediate vicinity of the pan the ground slopes approximately 2 per cent to the northeast. The Mississippi River, 1,800 feet wide, is six miles east of the evaporation pan. The ground in the vicinity of the station is used for lawn purposes and is not irrigated.

This station is operated on a cooperative basis, under supervision of the Weather Bureau Office at St. Louis, Mo., and Mr. W. W. Horner of the Washington University faculty is the supervising official. Mr. John H



Daily Temperatures for August 1938																																		
Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
Northern Division																																		
Brunswick §§.....	Maximum...	94	95	99	100	99	82	97	99	100	100	87	90	97	97	87	85	91	96	88	87	99	99	99	99	90	90	78	82	88	87	93	92.3	
Chillicothe §§.....	Minimum...	64	64	70	74	73	67	67	70	75	76	69	61	61	70	76	70	63	63	65	74	65	65	69	70	66	66	65	64	65	65	67	67.7	
Columbia.....	Maximum...	98	99	102	101	101	85	98	100	100	100	89	91	99	98	86	86	85	92	96	89	86	99	98	97	92	86	79	80	87	87	92	92.8	
Fayette.....	Minimum...	61	67	72	76	73	65	66	76	73	71	65	57	65	76	74	69	59	63	71	74	64	68	73	69	65	68	60	62	63	67	67.5		
Grant City.....	Maximum...	90	92	97	98	97	86	97	99	99	101	89	91	97	96	90	87	85	92	96	90	88	99	99	100	94	85	77	83	86	91	93	92.4	
Hannibal.....	Minimum...	66	70	74	75	73	69	72	76	78	73	63	72	76	75	71	64	67	75	64	73	72	78	77	82	80	66	64	68	67	68	70.2		
Kansas City.....	Maximum...	91	92	96	97	97	89	94	99	98	99	92	91	96	96	88	86	85	90	95	90	87	96	97	96	92	85	80	81	85	88	86	90.6	
Kirksville.....	Minimum...	64	79	72	74	73	66	69	73	80	75	78	60	81	79	75	70	62	74	73	72	78	77	82	80	66	79	62	63	67	76	77	72.8	
Lawson.....	Maximum...	98	96	99	97	101	93	87	97	97	95	85	91	97	96	98	75	83	90	95	88	83	94	98	90	86	83	75	81	88	86	86	90.6	
Hannibal.....	Minimum...	58	62	69	72	75	63	67	72	73	74	62	55	66	75	69	69	57	64	72	61	60	67	70	68	64	68	58	60	62	64	67	65.9	
Kansas City.....	Maximum...	88	93	96	97	97	91	92	92	97	97	92	87	94	93	91	85	84	86	96	92	83	96	96	96	85	86	79	80	83	87	87	90.3	
Kansas City.....	Minimum...	66	67	74	70	74	67	69	75	71	77	68	62	67	73	75	70	62	61	71	70	64	66	73	74	62	65	61	60	66	66	67	68.2	
Kirksville.....	Maximum...	97	98	99	100	99	97	102	102	101	103	89	93	98	97	84	86	85	96	96	98	85	100	99	98	100	87	80	86	87	92	93	94.4	
Kirksville.....	Minimum...	64	74	78	79	78	70	73	80	78	78	70	62	72	70	72	70	65	68	78	66	64	72	75	75	69	72	63	65	69	68	73	71.7	
Lawson.....	Maximum...	94	94	97	95	97	91	92	94	96	96	89	89	94	93	90	82	84	88	93	83	85	93	97	93	93	85	80	80	85	83	85	80.0	
Lawson.....	Minimum...	63	66	72	75	72	64	64	76	72	75	59	59	61	61	59	62	71	59	62	71	69	64	65	70	72	62	67	54	60	62	61	65	66.2
Louisiana.....	Maximum...	93	95	97	98	98	89	97	98	98	100	87	90	97	95	84	83	83	92	93	89	84	98	96	94	94	85	76	81	87	86	91	91.2	
Louisiana.....	Minimum...	62	66	71	75	72	65	70	73	74	74	64	57	66	73	68	68	61	64	72	70	62	67	62	69	65	67	61	62	63	62	65	66.8	
Macon§§.....	Maximum...	87	87	98	99	100	92	87	93	100	100	86	85	100	98	90	87	87	85	98	87	85	100	98	100	83	84	85	80	80	80	85	90.5	
Macon§§.....	Minimum...	57	62	70	74	76	72	70	74	74	78	70	53	74	65	75	74	63	53	65	67	64	64	67	66	63	60	63	60	66	60	63	66.5	
Maryville.....	Maximum...	94	96	99	100	99	85	97	100	101	100	88	88	97	97	88	87	83	90	96	86	85	97	99	100	89	86	80	80	83	86	91	91.8	
Maryville.....	Minimum...	63	67	71	75	71	64	64	72	72	73	65	58	65	72	71	69	58	60	66	70	61	64	67	68	63	59	60	62	63	64	65	69.9	
Mexico§§.....	Maximum...	97	97	99	97	102	98	93	95	95	92	86	88	96	96	90	75	81	88	92	88	80	94	96	92	88	82	75	80	86	84	86	89.9	
Mexico§§.....	Minimum...	60	71	71	73	75	65	69	74	76	73	63	68	67	75	69	69	60	64	74	65	62	68	69	69	64	68	61	60	65	64	68	67.7	
Moberly.....	Maximum...	89	93	99	100	100	87	98	98	101	101	90	90	98	98	91	91	84	93	99	89	87	101	101	101	91	86	80	79	85	91	93	93.0	
Moberly.....	Minimum...	66	68	72	72	73	66	67	74	68	75	70	58	67	75	74	71	61	61	70	72	63	67	77	71	64	66	62	63	61	64	69	68.0	
Moberly.....	Maximum...	94	96	97	98	97	95	96	94	94	93	93	89	97	95	90	82	90	95	91	85	95	96	96	90	89	82	77	86	88	89	91.6		
Moberly.....	Minimum...	63	67	71	76	71	66	66	70	73	76	67	57	68	73	74	69	59	61	71	70	62	66	73	71	63	66	62	61	65	62	69.7		
Oregon.....	Maximum...	98	97	100	101	102	90	98	101	101	96	87	93	101	98	89	80	85	93	94	88	87	89	98	95	92	86	75	85	90	91	89	92.9	
Oregon.....	Minimum...	64	71	74	70	74	65	70	75	77	75	63	60	70	75	67	69	60	65	74	69	65	67	72	71	65	67	63	61	63	63	68.1		
St. Charles §§.....	Maximum...	90	95	98	100	98	95	102	97	101	102	91	94	94	97	86	93	88	93	95	96	93	103	106	105	93	89	89	84	80	92	94	94.6	
St. Joseph.....	Minimum...	70	68	74	77	77	71	71	75	73	76	66	63	70	74	75	73	68	61	71	66	70	72	74	66	69	63	63	63	69	70	70.3		
Trenton.....	Maximum...	95	96	100	100	100	88	99	100	100	96	87	92	98	97	74	81	85	93	94	88	85	99	97	95	91	86	74	84	90	87	88	91.6	
Trenton.....	Minimum...	65	73	77	79	77	65	74	78	80	75	67	61	71	70	70	67	63	67	77	68	68	70	74	72	67	69	64	64	65	66	70.1		
Unionville §§.....	Maximum...	98	98	104	101	102	98	96	101	98	101	89	91	97	96	90	84	86	90	96	90	86	98	98	95	93	86	84	82	86	87	89	93.2	
Unionville §§.....	Minimum...	62	66	71	75	73	65	69	75	73	75	65	59	64	65	73	70	60	64	70	71	64	65	67	70	65	68	60	61	62	63	67	67.0	
Warrenton.....	Maximum...	100	100	102	99	100	88	92	100	102	98	87	92	100	98	98	83	87	91	98	92	87	99	99	99	98	97	90	79	85	92	88	90.9	
Warrenton.....	Minimum...	63	67	71	71	70	65	67	70	72	77	62	59	63	71	70	58	61	67	71	60	65	70	70	63	63	56	60	62	63	65	65.9		
Warrenton.....	Maximum...	84	89	94	96	96	95	96	101	98	98	98	91	97	95	93	90	85	91	98	97	90	100	100	100	96	91	83	79	84	92	94	93.3	
Keokuk, Iowa.....	Minimum...	67	69	71	70	74	67	68	73	73	73	73	60	67	73	72	71	64	60	70	71	65	67	74	74	65	66	62	61	66	68	71	68.6	
Keokuk, Iowa.....	Maximum...	91	94	98	95	97	81	88	98	99	85	87	94	94	89	85	82	87	95	86	84	96	99	98	98	85	84	81	79	84	87	90	89.8	
Keokuk, Iowa.....	Minimum...	67	72	76	75	70	69	73	74	72	75	69	66	69																				







## CLIMATOLOGICAL DATA

## MISSOURI SECTION

W. J. MOXOM  
ST. LOUIS, MO.

VOL. XLII

SEPTEMBER 1938

No. 9

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## GENERAL SUMMARY

The month was characterized by high temperatures and deficient moisture. There have been only ten Septembers during the last 50 years when the temperature averaged higher for the State, as a whole, than that of 1938, with an average of  $71.6^{\circ}$ . The unusual and persistently warm weather, which had its beginning late in July and early in August, continued throughout most of the month and well into October being relieved for only short periods by cooler weather.

The average rainfall for the State was 1.85 inches, and is the driest September since 1897, when the average for September of that year was 0.67 inch. During the last 50 years there have been only three Septembers when the average rainfall was less than that of September 1938.

These conditions rapidly intensified the drought, which began in July over the southern portion of the State, and particularly the southwest quadrant, where much of the late corn and other crops were ruined. Pastures and ranges suffered general deterioration and were completely burned over much of the southern section. Many wells failed, and creeks were very low by the end of month, and hauling of water for cattle and domestic uses was necessary in many localities.

Fall plowing and seeding were delayed generally throughout the State by the hard dry condition of the soil. Sleeping sickness among horses and mules was prevalent over large areas in central and western counties, with many fatalities.

## TEMPERATURE

The monthly mean temperature for the State, 82 stations reporting, was  $71.6^{\circ}$ , or  $2.3^{\circ}$  above normal. The highest monthly mean was  $74.0^{\circ}$  at St. Louis, and the lowest monthly mean was  $68.6^{\circ}$  at Greenville. The highest temperature recorded was  $103^{\circ}$  at Sikeston on the 7th, St. Charles on the 8th, Crystal City on the 9th, and Union on the 10th, and the lowest was  $30^{\circ}$  at Dean on the 20th. The greatest daily range was  $72^{\circ}$  at Garber on the 23d and 30th.

## PRECIPITATION

The average precipitation for the State, 143 stations reporting, was 1.85 inches, or 2.25 inches less than normal. The greatest local monthly amount was 5.89 inches at Willow Springs (near), and the least local monthly amount was 0.19 inch at Philadelphia. The greatest amount in any twenty-four hours was 2.77 inches at Lebanon on the 3d. The average number of days with 0.01 inch or more of precipitation was 6. A very local snow of one-half inch was reported (unofficially) on the 14th from Iantha, Barton County.

## MISCELLANEOUS PHENOMENA

Auroras.—14th, 27th.  
Dust.—27th, 28th.  
Earthquakes.—16th, 28th.  
Flood.—In Mississippi River between Keokuk, Iowa and Alton, Ill., Sept. 20 and continued into October.  
Fog.—Dense, 4th, 5th, 6th, 8th, 19th, 21st, 26th.  
Frost.—Light, 18th, 19th, 20th, 21st; heavy, locally on 19th, 20th; killing, locally on 19th and 20th.  
Hail.—Light, on 9th at Mount Vernon.

Halos.—Solar, 1st, 2d, 4th, 22d, 24th, 29th; lunar, 1st, 5th.  
Thunderstorms.—Local, 1st, 2d, 3d, 4th, 6th, 7th, 8th, 9th, 10th, 11th, 12th, 14th, 17th, 18th, 25th, 26th; more or less general, 5th, 13th.

Tornado.—On 1st in vicinity of Diamond, Newton County, at about 3 p. m. Trees were blown down, roofs damaged, windows blown out, and some corn was blown down. One person

(Continued on page 49)

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind				Relative humidity			Percentage of sunshine
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12 noon	6:30 p. m.	
Columbia.....	30.00	30.27	20	29.64	14	5.8	28	nw.	17	86	50	54	70
Kansas City.....	30.00	30.32	20	29.67	13	7.2	35	w.	10	84	49	50	76
St. Joseph.....	30.01	30.33	20	29.65	13	6.5	21	nw.	17	80	47	48	75
St. Louis.....	30.00	30.20	20	29.63	14	9.1	24	nw.	17	75	48	50	73
Springfield.....	30.02	30.20	20	29.75	17	6.8	22	w.	13	80	43	49	78
Cairo, Ill.....	30.00	30.20	20	29.63	14	6.8	23	e.	1	88	53	62	84
Keokuk, Iowa..	30.00	30.24	20	29.60	14	5.8	18	nw.	19	86	52	60	75

## COMPARATIVE DATA FOR SEPTEMBER

Year	Temperature			Precipitation					Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southeastern Division	Average, Southern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy
1888.....	65.2	97	28	1.01	1.13	0.87	1.02	0	4	..	..	..
1889.....	64.7	94	32	4.68	5.55	4.66	3.83	0	11	..	..	..
1890.....	63.7	98	30	4.36	3.25	5.49	4.34	0	9	..	..	..
1891.....	70.6	104	34	0.72	0.53	0.90	0.72	0	6	..	..	..
1892.....	67.8	97	32	2.46	2.73	2.71	1.93	0	4	19	6	6
1893.....	69.8	107	26	4.07	3.50	3.96	4.74	0	6	17	7	6
1894.....	68.5	101	34	4.94	4.16	6.42	4.23	0	8	13	11	6
1895.....	71.8	104	24	2.38	2.04	2.43	2.66	0	4	19	8	3
1896.....	65.0	101	28	4.09	4.67	3.92	3.69	0	10	11	10	9
1897.....	74.3	105	27	0.67	0.97	0.61	0.43	0	2	23	5	2
1898.....	70.9	103	37	6.70	0.76	7.25	6.10	0	9	15	9	6
1899.....	67.4	108	21	1.96	2.27	1.79	1.81	0	4	20	6	4
1900.....	71.1	100	29	4.59	4.77	5.56	3.44	0	10	13	10	7
1901.....	68.9	103	27	2.16	2.41	2.75	1.31	0	6	18	8	4
1902.....	63.2	95	30	4.63	4.74	5.36	3.79	0	10	15	6	9
1903.....	70.6	98	32	4.16	5.64	3.56	3.28	0	8	17	6	7
1904.....	69.6	96	34	3.77	4.20	2.78	3.82	0	7	16	8	6
1905.....	69.6	98	41	7.40	4.72	8.36	5.64	0	10	15	6	9
1906.....	71.9	98	36	4.53	3.64	3.75	6.31	0	11	15	8	7
1907.....	68.9	101	31	2.06	2.35	1.62	2.20	0	6	18	7	5
1908.....	71.6	99	28	2.15	1.49	2.69	2.27	0	4	18	8	4
1909.....	68.7	105	28	4.48	5.30	3.35	4.79	0	8	18	6	6
1910.....	69.5	97	34	5.45	5.90	6.44	4.01	0	10	14	6	10
1911.....	73.7	105	39	6.27	8.17	5.98	4.65	0	11	13	7	10
1912.....	68.6	105	27	3.11	2.72	2.87	3.74	0	6	17	5	8
1913.....	69.4	109	27	4.75	3.74	4.64	5.88	0	9	13	7	10
1914.....	69.6	99	35	6.06	7.19	6.01	4.98	0	9	15	8	7
1915.....	70.6	98	34	5.18	6.21	6.93	2.40	0	7	16	7	7
1916.....	67.8	101	27	2.97	2.73	3.18	2.99	0	6	19	7	4
1917.....	67.9	101	33	2.76	2.97	3.64	1.66	0	5	19	6	5
1918.....	62.3	96	29	4.83	4.11	5.44	4.95	0	7	17	6	7
1919.....	71.4	104	38	3.14	4.13	1.95	3.34	0	5	20	6	4
1920.....	70.0	100	31	4.60	4.87	5.78	3.64	0	9	17	7	6
1921.....	73.4	104	34	6.94	8.05	7.03	5.74	0	13	13	9	8
1922.....	71.7	107	31	3.10	3.95	3.62	1.74	0	5	21	5	4
1923.....	68.7	98	33	4.44	4.84	4.75	3.74	0	11	12	9	9
1924.....	61.0	96	29	3.70	3.41	4.55	3.40	0	8	14	8	8
1925.....	74.6	110	45	6.56	5.84	6.48	7.37	0	10	14	6	10
1926.....	69.3	97	27	8.64	11.74	9.12	5.06	0	13	12	7	11
1927.....	71.6	102	29	3.72	3.11	3.41	4.65	0	8	17	7	6
1928.....	65.0	95	28	2.50	5.36	1.62	0.53	0	5	20	7	3
1929.....	67.4	98	33	3.16	3.16	2.83	3.48	0	8	13	10	7
1930.....	71.3	105	37	4.28	2.86	5.48	4.49	0	8	16	7	7
1931.....	75.0	104	36	3.91	5.97	3.18	2.58	0	7	19	7	4
1932.....	67.8	99	33	2.56	2.08	2.04	3.57	0	6	17	8	5
1933.....	74.6	102	36	4.69	3.00	4.92	6.16	0	9	16	8	6
1934.....	65.6	95	32	7.39	7.49	7.79	6.89	0	12	12	8	10
1935.....	68.1	98	33	3.51	4.30	3.13	3.10	0	6	20	4	6
1936.....	73.6	109	37	8.62	8.76	9.98	7.12	0	11	11	9	10
1937.....	69.4	103	29	2.41	1.12	2.53	3.57	0	5	18	7	5
1938.....	71.6	103	30	1.85	1.61	2.40	1.65	0	6	18	7	5
Period.....	69.3	110	21	4.10	4.30	4.28	3.71	0	8	18	7	7



## Climatological Data for September 1938

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches				Number of days				Prevailing direction of wind	Observers		
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Length of record, years	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelting	With precip., .01 inch or more	Clear			Partly cloudy	Cloudy
Northern Division																					
Bethany	Harrison	916	43	69.8	+ 2.7	97	8	36	19	46	45	0.92	-3.64	0.44	0	5	21	6	3	sw.	A. S. Cumming
Brunswick	Chariton	652	57	70.8	+ 3.8	100	10	39	20	45	59	1.54	-3.27	1.10	0	5	21	1	8	se.	O. K. Benecke
Canton, Lock & Dam 20	Lewis	488	0	71.4	.....	100	8	39	19	38	8	1.45	.....	0.86	0	4	16	4	10	sw.	Lockmaster
Chillicothe	Livingston	779	29	71.0	+ 3.5	100	9†	36	19	45	32	1.44	-3.34	1.18	0	4	22	5	3	sw.	Wm. J. Olenhouse
Clifton Hill	Randolph	731	39	69.5	+ 0.9	97	8†	35	19	39	29	1.37	-3.17	0.67	0	6	17	6	7	sw.	Dr. A. J. Bradsher
Columbia	Boone	740	48	71.6	+ 3.4	99	10	40	19	37	48	1.49	-2.86	0.82	0	7	16	6	8	s.	U. S. Weather Bureau
Conception	Nodaway	980	49	71.9	+ 4.7	99	10	34	19	37	54	0.61	-4.03	0.35	0	5	17	12	1	s.	Fr. Adelhelm Hess
Edgerton	Platte	856	18	70.4	+ 2.5	99	9	32	19†	50	27	0.87	-3.72	0.29	0	8	21	4	5	s.	Fred L. Stiff
Elsberry	Lincoln	449	7	70.0	.....	98	10	38	21	43	7	2.14	.....	1.10	0	8	15	12	3	nw.	Ray E. Mills
Fayette	Howard	680	58	71.4 <sup>a</sup>	+ 3.3	99	10	38	19	38	55	1.05	-3.91	0.28	0	7	18 <sup>a</sup>	4 <sup>a</sup>	7 <sup>a</sup>	sw.	Morrison Observatory
Fulton	Callaway	818	50	72.8	+ 3.9	102	10	40	19	43	46	2.98	-1.51	1.47	0	6	19	7	4	sw.	Clyde C. Herring
Gorin	Scotland	700	.....	.....	.....	.....	.....	.....	.....	.....	51	2.01	-2.66	1.28	0	4	19	4	7	sw.	W. L. Harker
Grant City	Worth	1,134	34	70.0	+ 3.0	97	9†	34	18	45	46	1.58	-3.11	1.21	0	6	17	10	3	sw.	Howard Rybolt
Hannibal	Marion	759	46	70.2	+ 2.5	97	8	37	19	34	54	1.09	-2.88	0.37	0	6	12	6	12	n.	Hannibal Water Dept.
Kansas City	Jackson	741	49	72.3	+ 3.4	99	9	40	19	38	49	1.84	-2.72	0.72	0	9	17	8	5	sw.	U. S. Weather Bureau
Kansas City University	Jackson	908	0	71.5 <sup>b</sup>	.....	97	9	32	19	40	0	2.74	.....	0.78	0	7	15	8	7	s.	University of Kansas City
Kidder	Caldwell	1,020	46	70.8	+ 3.5	98	7†	35	19	38	50	0.71	-4.49	0.20	0	8	21	5	4	sw.	Mrs. Geraldine Terry
King City	Gentry	1,095	.....	.....	.....	.....	.....	.....	.....	.....	12	0.87	-4.55	0.48	0	6	10	15	5	sw.	John M. Martin
Kirkville	Adair	969	49	69.4	+ 3.1	96	9	36	19	41	56	3.18	-2.00	1.68	0	6	12	12	6	sw.	Charles Noble
Lawson	Ray	1,070	0	70.5	.....	96	9†	35	19	37	0	1.48	.....	0.90	0	9	13	12	5	se	Elmer E. Lamb
Linn	Linn	816	.....	.....	.....	.....	.....	.....	.....	.....	6	0.58	.....	0.24	0	8	22	3	5	sw.	H. D. Taggart
Louisiana	Pike	469	44	70.0	+ 2.0	100	8†	38	19	47	57	2.30	-2.13	0.65	0	7	17	5	8	w.	Stark Bro's Nurseries
Macon	Macon	875	39	69.7	+ 1.8	99	9	35	19†	43	45	1.42	-3.02	0.74	0	5	20	6	4	w.	Mrs. W. C. Brown
Marion	Nodaway	1,169	48	69.7	+ 4.1	98	9	34	19	37	44	1.63	-3.05	1.18	0	6	16	6	8	sw.	R. B. Montgomery
Mexico	Andrain	800	49	71.3	+ 2.8	102	9†	38	19	45	60	1.36	-3.61	0.78	0	6	21	2	7	sw.	Mrs. Abbie Snoddy
Moberly	Randolph	875	1	69.8	.....	102	10	36	19	44	1	0.87	.....	0.30	0	4	19	5	6	s.	McCormick Hospital
Oregon	Holt	1,048	82	71.8	+ 4.7	99	9†	34	19	38	82	0.55	-4.55	0.20	0	5	24	5	1	se.	Miss Mina Wright
St. Charles	St. Charles	520	50	73.4	+ 5.1	103	8	42	19	42	60	1.36	-2.48	0.48	0	7	26	4	0	nw.	Martin L. Comann
St. Joseph	Buchanan	957	28	71.7	+ 3.3	98	9	39	19	39	66	1.24	-2.68	0.60	0	9	19	8	3	s.	U. S. Weather Bureau
Steffenville	Lewis	650	40	69.2	+ 0.2	96	8†	36	19	41	45	1.51	-2.99	0.57	0	9	17	5	8	n.	Frank Hall
Tarkio	Atchison	916	35	69.2	+ 2.9	96	8†	36	19	36	44	2.37	-1.87	1.60	0	5	15	9	6	se.	Albert Volker
Trenton	Grundy	822	42	71.4	+ 4.2	100	10	37	19	45	43	1.08	-3.67	0.45	0	7	20	9	1	s.	W. H. Estes
Unionville	Putnam	1,062	45	71.0	+ 3.9	100	9	35	19	45	45	0.78	-4.31	0.30	0	4	19	4	7	sw.	John H. Schick
Warrenton	Warren	816	56	72.8 <sup>b</sup>	+ 3.8	99	10	39	19	35	48	2.04	-2.32	0.79	0	6	12 <sup>b</sup>	9 <sup>b</sup>	7 <sup>b</sup>	sw.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.	574	66	70.4	+ 2.9	96	9	40	19	34	66	3.49	-0.35	1.57	0	6	14	6	10	sw.	U. S. Weather Bureau
Division means and extremes		.....	.....	70.8	+ 3.2	103	8	32	19†	50	.....	1.51	-2.79	2.56	0	6	18	7	5	sw.	.....
Southwestern Division																					
Appleton City	St. Clair	813	43	71.6	+ 1.2	100	10	38	19	44	46	1.79	-2.59	0.59	0	8	21	2	7	sw.	Rolla Brown
Bollivar	Polk	1,071	35	73.6	+ 3.7	100	10	40	20	38	43	2.05	-2.16	0.71	0	7	13	9	8	n.	Southwest Baptist College
Boonville	Cooper	650	0	72.8	.....	98	10	40	19	39	61	2.01	-3.18	0.75	0	9	17	5	8	s.	Boonville Water Dept.
Clinton	Henry	765	45	71.6	+ 0.8	99	10	37	19	41	51	3.41	-1.11	1.13	0	7	.....	.....	.....	.....	U. S. Weather Bureau
Dean ft.	McDonald	1,000	34	71.7	+ 0.7	99	1	30	20	50	39	1.05	-2.83	0.52	0	4	17	12	1	w.	E. S. Taylor
Eldon	Miller	934	43	71.2	+ 1.8	99	10	40	18	44	39	2.78	-1.84	1.01	0	7	16	6	8	s.	E. H. Shepherd
Garber	Taney	950	4	72.3	.....	101	9	34	20	52	4	0.73	.....	0.49	0	8	10	4	16	sw.	William H. Durham
Harrisonville	Cass	904	60	71.2	+ 2.7	98	10	36	19	41	63	4.81	-0.09	1.57	0	9	14	6	10	sw.	John H. Patterson
Jefferson City	Cole	557	48	70.6	+ 1.3	101	10	38	19	44	56	2.59	-1.64	1.63	0	8	23	4	3	s.	Mrs. Frank Kliegel
Lakeside	Miller	595	7	71.9	.....	98	9	43	19	43	7	3.73	.....	2.24	.....	7	.....	.....	.....	ne.	W. S. Frame
Lamar	Barton	980	50	73.6	+ 2.8	100	26†	38	20†	49	57	2.87	-1.68	0.74	0	6	18	9	3	sw.	Jesse A. Mann
Lebanon	Laclede	1,265	50	71.2	+ 1.8	95	10	40	19†	36	51	5.30	+0.81	2.77	0	7	19	4	7	sw.	Mrs. Rosa E. Montelius
Lexington	Lafayette	688	53	71.8	+ 3.0	99	10	38	19	39	54	2.10	-2.67	1.12	0	9	19	8	3	sw.	Miss Carrie Loomis
Lockwood	Dade	1,078	32	72.8	+ 1.9	100	8†	43	20	38	42	1.49	-3.29	0.56	0	5	17	12	1	sw.	Hubert A. Nieman
Marshall	Saline	779	51	71.7	+ 2.9	97	9†	38	19	38	48	1.32	-4.18	0.41	0	7	19	4	7	sw.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	37	73.2	+ 4.3	99	1	41	21	38	41	2.51	-1.55	1.04	0	8	18	10	2	s.	Mo. Fruit Exp. Station
Mount Vernon	Lawrence	1,174	26	72.4	+ 1.9	99	9	35	20	42	38	2.29	-1.55	0.90	0	5	9	19	2	se.	G. H. Boswell
Neosho	Newton	1,011	51	72.0	+ 1.5	97	10	32	20	44	55	0.53	-3.76	0.21	0	3	21	6	3	sw.	U. S. Fisheries Station
Nevada	Vernon	862	45	72.2	+ 2.7	101	7†	36	19†	45	46	1.35	-2.96	0.65	0	6	16	9	5	sw.	T. J. Kaupp
Sedalia	Pettis	1,010	25	71.8	+ 2.6	99	10	38	19	38	27	3.55	-1.35	1.51	0	9	21	4	5	sw.	Mrs. Laura S. Trader
Seligman	Barry	1,542	37	71.4	+ 1.8	95	9	38	20†	41	35	1.15	-2.53	0.84	0	5	20	8	2	se.	Floyd E. Fawver
Seymour(near)	Webster	1,642	32	70.4	+ 1.6	95	11	37	21	41	32	2.69	-1.33	1.34	0	8	18	4	8	s.	A. L. Hailey
Springfield	Greene	1,301	50	72.9	+ 4.0	96	10	44	21	37	50	1.81	-1.71	1.10	0	8	15	10	5	s.	U. S. Weather Bureau
Versailles	Morgan	1,037	11	71.4 <sup>a</sup>	+ 0.7	99	10	38	19	42	14	3.68	-0.83	1.37	0	10	18 <sup>a</sup>	3 <sup>a</sup>	8 <sup>a</sup>	nw.	I. M. Wilson
Warrensburg	Johnson	878	51	72.5	+ 2.3	101	10	38	19	38	58	2.50	-2.28	0.95	0	6	19	6	5	sw.	E. A. Markey
Warsaw	Benton	687	37	71.8	+ 1.3	100	10	39	19†	43	43	4.91	-0.12	1.35	0	9	19	6	5	sw.	Everett Martin
Division means and extremes		.....	.....	72.0	+ 2.1	101	7†	30	20	52	.....	2.40	-1.88	2.77	0	7	17	7	6	sw.	.....
Southeastern Division																					
Advance	Stoddard	355	1	71.6	.....	99	10	39													







Day of month

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation.

†† Precipitation measured in the morning; amount then recorded is for the preceding 24 hours.

\*\*\* Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight.

T. Trace, or less than 0.01 inch.

of fall not recorded.

\* Precipitation is for 24-hour period, midnight to midnight.

\*\* Precipitation in the next following measurement; separate dates

† Estimated.

‡ Partially estimated.

|||| Incomplete.

NOTE:—In addition to the stations shown on daily temperature page, records of daily temperatures are kept at the following stations in Missouri: Advance, Appleton City, Bethany, Bolivar, Boonville, Campbell, Canton Lock No. 20, Clifton Hill, Columbia Airport, Conception, Dean, Edgerton, Elsberry, Fulton, Goodland, Greenville, Kansas City University, Kidder, Kirksville Airport, Koshkonong, Lakeside, Licking (near), Lockwood, Marble Hill, Marshall Airport, Mount Vernon, St. Joseph Airport, St. Louis Airport, St. Louis University, Saverton Lock No. 22, Seligman, Seymour, Springfield Airport, Steffenville, Tarkio, Versailles, Warsaw, and Washington University.

Station	Data	Day of month																														Monthly	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	..	
Columbia.....	{ Evaporation .....	.166	.180	.071	.098	.103	.088	.187	.093	.312	.209	.237	.245	.000	.036	.054	.129	.058	.119	.099	.157	.126	.122	.155	.135	.155	.145	.141	.201	.144	.132	....	4.09
	{ Mean temperature ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
	{ Wind movement ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Reside..... (Sage Dam)	{ Evaporation .....	.321	..	.064	.091	.179	.099	.205	.237	.246	.248	.314	.310	.057	.062	.118	.161	.126	.218	.170	.185	.167	.168	.198	.174	.190	.170	.167	.223	.176	.182	....	5.40
	{ Mean temperature ..	.78	.72	.74	.77	.80	.80	.82	.82	.84	.84	.83	.76	.77	.70	.68	.63	.64	.58	.54	.59	.60	.66	.70	.73	.72	.75	.72	.66	.65	.70	....	71.9
	{ Wind movement ..	.23	.30	.21	.22	.8	.25	.14	.26	.16	9	.45	.39	.31	.85	.89	.48	.28	.95	.81	.49	.44	.26	.19	.23	.15	.20	.12	.26	.23	.18	....	1,008
Louis..... Washington (University)	{ Evaporation .....	.220	.214	.097	.155	.200	.176	.258	.223	.244	.252	.157	.183	.064	.054	.135	.177	.098	.187	.071	.144	.146	.149	.136	.168	.167	.135	.166	.220	.144	.129	....	4.86
	{ Mean temperature ..	.78	.74	.78	.77	.79	.82	.86	.87	.86	.84	.86	.83	.76	.75	.68	.58	.64	.56	.54	.58	.60	.66	.72	.74	.75	.75	.72	.66	.66	.72	....	73.0
	{ Wind movement ..	.33	.31	.14	.16	.15	.23	.26	.22	.19	.29	.29	.26	.22	.39	.64	.60	.30	.51	.35	.47	.36	.32	.20	.15	.15	.16	.17	.41	.18	.31	....	872

Observations taken at 8:00 a. m. except at 7:30 a. m. at Lakeside. For Columbia, Lakeside, and St. Louis (Washington University) descriptions see July 1938, April 1932, and August 1938 reports respectively. \*\*\*\* Evaporation included in next measurement.

Continued from page 46

Windstorm.—On 1st at Aurora, New Madrid, Parma, and in parts of Jasper and Newton counties. Trees and telephone poles

were blown down at New Madrid and at Aurora trees and wires were blown down and plate glass windows were broken. At Aurora the damage was estimated at \$300.

## ERRATA

August 1938, page 42: mean temperature at West Plains should be 80.1; page 44: evaporation at Columbia on 14th should be .392; total evaporation for month should be 6.621; page 45: minimum temperature at West Plains on 25th should be 66, mean minimum should be 67.5.



\* , b , c , etc., indicate respectively, 1, 2, 3, etc., days missing from the record. §§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day on which it almost always occurs. ¶ Estimated. WBO, St. Louis, 10-26-38-1055.







## CLIMATOLOGICAL DATA

## MISSOURI SECTION

W. J. MOXOM  
ST. LOUIS, MO.

Vol XLII

OCTOBER 1938

No. 10

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## GENERAL SUMMARY

The hot, dry weather of September continued through October, with only slight interruption. The mean monthly temperature of 63.9° for the State was the greatest for October since the beginning of records in 1888, the nearest approach being October 1897, when the mean temperature was 62.5°.

There were only two periods during the month when rainfall occurred generally over the State. On the 12-13th light to moderate showers were general, and, while beneficial, were insufficient to break the fall drought of several weeks duration. On the 18-19th moderate to heavy rainfall occurred generally throughout the State, and did much to alleviate drought conditions which had become critical in several sections. The remainder of the month was dry.

The average monthly precipitation for the State was 1.23 inches, or 2.93 inches below normal. There have been only nine Octobers since the beginning of records in 1888, with monthly precipitation less than that of 1938, and only one period when the combined deficiency of August, September, and October, was greater. This was in 1897 when the deficiency for those months totaled 7.18 inches. In the corresponding months of 1938 the deficiency was 6.34 inches.

The long period of hot, dry weather in October only served to intensify the drought which had reached a critical stage during September, and to classify it as the worst fall drought of record in many sections. Only a small percentage of fall plowing and seeding was accomplished during the month on account of the hard, dry soil. Many wells failed that never failed before in the memory of the oldest inhabitants. Creeks were very low, and hauling of water for cattle and domestic needs was necessary in many localities.

## TEMPERATURE

The monthly mean temperature for the State, 82 stations reporting, was 63.9°, or 6.4° above normal. The highest monthly mean was 66.8° at Marshall, Mount Vernon, and Sedalia, and the lowest monthly mean was 58.0° at Greenville. The highest temperature recorded was 99° at Sikeston on the 5th, and the lowest was 19° at Goodland on the 24th. The greatest daily range was 60° at Appleton City on the 25th.

## PRECIPITATION

The average precipitation for the State, 142 stations reporting, was 1.23 inches, or 1.65 inches less than normal. The greatest local monthly amount was 4.16 inches at Mountain Grove, and the least local monthly amount was only a trace at Conception. The greatest amount in any twenty-four hours was 3.65 inches at Seymour (near) on the 18-19th. The average number of days with 0.01 inch or more of precipitation was 3. There was no snow recorded anywhere in the State.

## MISCELLANEOUS PHENOMENA

Flood.—In Mississippi River between Keokuk, Iowa, and Grafton, Ill., continued from September to October 6th.

Fog.—Dense, 1st, 12th, 13th, 25th, 30th.

Frosts.—Light, 19th, 20th, 21st, 23d, 24th, 25th, 27th, 28th; heavy, 20th, 23d, 24th, 25th; killing, 20th, 23d, 24th.

Hail.—Light, on 12th at Lockwood.

Halos.—Solar, 5th, 12th, 15th, 22d, 31st; lunar, 12th, 29th.

Sleet.—Locally on 22d.

Smoke.—Dense, locally on 28th, 29th, 30th, 31st.  
Thunderstorms.—Local, 5th, 6th, 7th, 8th, 10th, 11th, 13th, 29th; more or less general, 12th, 18th, 19th.  
Windstorms.—No damaging winds reported.

## ERRATA

September 1938, page 46: miscellaneous phenomena table under flood, Alton, Ill., should be Grafton, Ill.; page 47: mean temperature at Rolla should be 71.8, departure should be +3.1; page 50: maximum temperature on 14th at Rolla should be 74, mean maximum should be 83.1.

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind				Relative humidity			Percentage of sunshine
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12 noon	6:30 p. m.	
Columbia.....	30.09	30.33	9	29.52	22	7.1	21	nw.	22	69	35	41	87
Kansas City.....	30.06	30.31	9	29.54	21	8.7	27	nw.	22	69	37	39	85
St. Joseph.....	30.05	30.29	6	29.54	21	8.0	24	nw.	22	65	35	38	81
St. Louis.....	30.09	30.38	7	29.54	22	10.3	26	sw.	12	61	36	40	89
Springfield.....	30.10	30.32	9	29.65	22	7.6	19	sw.	12	65	32	41	89
Cairo, Ill.....	30.10	30.36	9	29.70	22	6.5	19	n.	19	79	40	48	92
Keokuk, Iowa..	30.08	30.39	6	29.47	22	7.0	22	nw.	22	71	42	47	80

## COMPARATIVE DATA FOR OCTOBER

Year	Temperature			Precipitation				Number of days				
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy
1888.....	53.6	89	24	2.72	2.02	3.32	2.82	...	6	...	...	...
1889.....	53.8	91	22	2.32	2.54	2.05	2.38	...	...	...	...	...
1890.....	54.8	91	20	2.35	3.01	2.70	1.33	...	...	...	...	...
1891.....	55.7	92	20	1.05	1.31	1.09	0.76	...	...	...	...	...
1892.....	57.5	95	16	2.40	2.04	2.78	2.39	0	5	16	7	8
1893.....	56.7	95	16	1.12	0.48	0.91	1.97	...	...	...	...	...
1894.....	57.6	94	18	1.82	2.09	1.26	2.12	T.	6	17	8	6
1895.....	51.2	89	14	0.42	0.26	0.34	0.66	T.	2	21	6	4
1896.....	54.1	90	19	2.48	2.70	2.43	2.32	0	5	19	6	6
1897.....	62.5	99	23	0.74	0.55	0.81	0.87	0	3	22	6	3
1898.....	53.5	95	19	4.35	4.26	4.18	4.61	1.4	8	11	7	13
1899.....	62.4	100	24	3.16	1.98	3.58	3.93	0	5	20	6	5
1900.....	62.4	92	25	3.96	5.23	3.78	2.86	0	7	17	7	7
1901.....	60.1	96	24	1.69	1.55	1.63	1.89	0	6	18	8	5
1902.....	59.5	88	23	2.41	2.90	2.30	2.02	0	5	21	5	5
1903.....	57.3	90	19	3.06	2.19	3.76	3.22	0	6	19	6	6
1904.....	57.6	90	19	0.88	0.93	0.81	0.90	0	3	20	7	4
1905.....	55.1	90	20	4.85	3.67	5.78	5.09	0.3	10	15	7	9
1906.....	56.3	94	17	1.06	0.66	0.89	1.62	0	5	17	6	8
1907.....	56.7	94	18	2.93	2.02	3.62	3.14	0	7	17	6	8
1908.....	56.3	92	21	2.39	3.60	3.11	0.45	0.8	5	18	6	7
1909.....	57.2	96	20	2.72	3.45	2.99	1.71	T.	6	19	5	7
1910.....	59.4	94	15	2.97	0.97	1.76	6.18	0	5	22	4	5
1911.....	56.9	96	25	3.16	3.81	3.31	2.36	0.2	8	11	7	13
1912.....	59.1	97	21	3.78	3.87	4.29	3.17	0.7	6	20	5	6
1913.....	54.7	93	11	4.65	3.65	3.92	6.36	3.3	9	15	6	10
1914.....	59.2	88	19	4.59	4.32	4.28	5.17	0	7	14	6	11
1915.....	59.3	95	22	1.22	0.77	1.61	1.29	0	3	23	5	3
1916.....	58.0	95	20	2.12	2.53	2.03	1.79	0.3	6	18	5	8
1917.....	49.8	93	12	1.15	1.25	0.77	1.43	0.2	6	16	8	7
1918.....	60.6	95	28	3.45	3.02	3.51	3.82	0	7	14	6	11
1919.....	58.4	98	17	7.07	3.49	8.48	9.23	0	11	10	7	14
1920.....	61.3	93	18	3.14	1.94	3.76	3.73	T	7	17	6	8
1921.....	57.9	92	24	2.15	2.78	2.20	1.47	0	5	21	5	5
1922.....	59.9	97	18	2.04	2.00	1.84	2.28	0	5	20	5	6
1923.....	53.0	89	17	3.55	2.40	4.40	3.84	0.1	9	15	5	11
1924.....	61.8	92	21	1.22	1.54	1.59	0.52	0	4	22	5	4
1925.....	48.6	92	3	4.98	3.70	4.12	7.12	2.4	10	8	8	15
1926.....	57.3	93	21	4.73	4.43	4.98	4.77	0	9	14	6	11
1927.....	60.9	93	26	4.59	5.49	5.33	2.96	0	5	22	5	4
1928.....	60.9	94	22	3.82	3.85	2.91	4.71	0	8	15	8	8
1929.....	57.2	91	23	5.36	6.30	5.97	3.80	T.	10	15	6	10
1930.....	55.3	92	11	3.09	2.43	3.68	3.17	T.	6	16	6	9
1931.....	61.7	95	27	3.37	3.89	3.99	2.23	0	8	15	7	9
1932.....	55.7	90	22	3.54	2.79	3.19	4.65	0	5	18	5	8
1933.....	56.4	86	23	2.90	1.68	3.78	3.25	0	7	17	8	6
1934.....	61.1	90	24	2.50	2.22	3.02	2.25	0	4	22	5	4
1935.....	57.1	90	21	3.47	2.04	4.42	3.94	T.	10	12	7	12
1936.....	56.7	89	20	3.55	2.45	3.76	4.43	T.	8	16	6	9
1937.....	56.3	88	15	2.44	1.87	1.89	3.86	T.	7	16	6	9
1938.....	63.9	99	19	1.23	1.11	1.50	1.09	0	3	24	4	3
Period.....	57.5	100	- 8	2.88	2.58	3.03	3.02	0.2	6	17	6	8



## Climatological Data for October 1938

Stations	Counties	Elevation, feet	Temperature, in degrees Fahr.							Precipitation, in inches				Number of days				Prevailing direction of wind	Observers		
			Length of record, years	Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Length of record, years	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelted	With precip., .01 inch or more	Clear			Partly cloudy	Cloudy
Northern Division																					
Bethany	Harrison	916	43	63.0	+ 8.2	96	4	25	24	54	45	0.67	-2.25	0.59	0	2	24	3	4	s.	A. S. Cumming
Brunswick	Chariton	652	57	63.6	+ 8.3	94	5	29	24†	49	59	1.53	-1.47	1.15	0	4	27	2	2	se.	O. K. Bewecke
Canton, Lock & Dam 20	Lewis	488	0	63.0	.....	95	8	31	24	41	8	1.20	.....	0.89	0	2	24	1	6	s.	Lockmaster
Chillicothe	Livingston	779	29	63.6	+ 8.6	94	4	29	24†	47	32	1.85	-1.29	1.62	0	3	24	6	1	sw.	Win. J. Olenhouse
Clifton Hill	Randolph	731	39	63.8	+ 7.1	91	5	27	24	42	29	0.56	-1.96	0.46	0	2	23	6	2	s.	Dr. A. J. Bradsher
Columbia	Boone	740	48	65.1	+ 8.5	92	4	30	24	45	48	0.59	-2.02	0.45	0	2	21	8	2	s.	U. S. Weather Bureau
Conception	Nodaway	980	49	65.6	+10.2	95	4	30	23†	41	54	T.	-2.88	T.	0	0	16	13	2	s.	Fr. Adelhelm Hess
Edgerton	Platte	856	18	63.5 <sup>a</sup>	+ 7.2	97	5	23	24†	54	27	0.15	-2.47	0.09	0	2	26	1	4	s.	Fred L. Stiff
Elsberry	Lincoln	449	7	60.9	.....	94	5	27	24	43	7	0.98	.....	0.60	0	4	22	9	0	nw	Ray E. Mills
Fayette	Howard	680	58	64.7	+ 8.3	93	5	29	24	44	55	0.66	-2.23	0.62	0	3	28	1	2	se.	Morrison Observatory
Fulton	Callaway	818	50	63.8	+ 6.4	94	5	29	24	43	46	2.07	-1.35	2.02	0	2	27	2	2	se.	Clyde C. Herring
Gorin	Scotland	700	...	.....	.....	...	...	...	...	...	51	1.96	-1.02	1.65	0	2	25	2	4	se.	W. L. Harker
Graut City	Worth	1,134	34	63.8	+ 8.7	95	4	24	24	49	46	0.17	-2.87	0.17	0	1	12	15	4	se.	Howard Rybolt
Hannibal	Marion	759	46	63.0	+ 7.0	92	4†	31	24	39	54	0.83	-1.56	0.65	0	3	17	7	7	se.	Hannibal Water Dept.
Kansas City	Jackson	741	49	66.4	+ 8.7	93	5	33	23	50	49	0.70	-2.22	0.57	0	2	19	8	4	sw.	U. S. Weather Bureau
Kansas City University	Jackson	908	0	66.0	.....	91	5	28	23	54	0	0.59	.....	0.44	0	2	18	12	1	sw.	University of Kansas City
Kidder	Caldwell	1,020	46	64.8	+ 9.0	94	4	27	24	40	50	0.21	-2.86	0.11	0	3	24	4	3	se.	Mrs. Geraldine Terry
King City	Gentry	1,095	...	.....	.....	...	...	...	...	...	12	0.34	-2.56	0.30	0	2	18	10	3	sw.	John M. Martin
Kirksville	Adair	969	49	62.0 <sup>a</sup>	+ 7.3	91	4	29	24	45	56	1.75	-1.41	1.43	0	3	15 <sup>b</sup>	13 <sup>b</sup>	2 <sup>b</sup>	s.	Charles Noble
Lawson	Ray	1,070	0	64.6	.....	93	5	27	24	43	0	0.54	.....	0.41	0	2	14	15	2	s.	Elmer E. Lamb
Linn	Linn	816	...	.....	.....	...	...	...	...	...	6	1.77	.....	1.50	0	3	26	2	3	sw	H. D. Taggart
Louisiana	Pike	469	44	60.3	+ 4.1	93	4†	28	25	47	57	2.33	-0.95	1.98	0	5	26	4	1	w.	Stark Bro's Nurseries
Macon	Macon	875	39	62.6	+ 6.3	94	4	27	24	47	45	1.05	-1.84	0.84	0	3	24	3	4	se.	Mrs. W. C. Brown
Maryville	Nodaway	1,169	48	63.0	+ 9.5	94	4	23	24	44	44	0.23	-2.74	0.18	0	2	21	3	7	se.	R. B. Montgomery
Mexico	Audrain	800	49	63.0	+ 6.7	95	4†	29	24	47	60	1.05	-2.02	0.95	0	2	...	...	...	s.	Mrs. Abbie Snoddy
Moberly	Randolph	875	1	63.0	.....	96	15	30	23†	46	1	1.28	.....	1.23	0	3	21	7	3	s.	McCormick Hospital
Oregon	Holt	1,048	82	65.9	+10.8	96	4	28	24	43	82	0.34	-2.41	0.22	0	4	24	7	0	sw.	Miss Mina Wright
St. Charles	St. Charles	520	50	64.6	+ 6.4	94	8	32	24	46	60	1.55	-1.63	1.48	0	2	26	3	2	sw.	Martin L. Comann
St. Joseph	Buchanan	957	28	66.1	+10.1	94	4	32	24	49	66	0.14	-2.75	0.11	0	2	24	5	2	s.	U. S. Weather Bureau
Steffenville	Lewis	650	40	62.8	+ 5.4	92	4	29	24	43	45	1.32	-1.41	1.10	0	2	20	8	3	e.	Frank Hall
Tarkio	Atchison	916	35	63.8	+ 9.0	96	3	27	24	51	44	0.13	-2.68	0.13	0	1	18	11	2	sw.	Albert Volker
Trenton	Grundy	822	42	63.9	+ 8.0	96	4	28	24	49	43	0.83	-2.30	0.41	0	3	26	4	1	s.	W. H. Estes
Unionville	Putnam	1,062	45	63.0	+ 7.8	95	4†	26	24	53	45	1.94	-1.19	1.12	0	4	20	4	7	sw.	John H. Schick
Warrenton	Warren	816	56	64.2 <sup>b</sup>	+ 8.2	91	4†	30	24	37	48	2.54	-0.90	2.22	0	4	26	3	2	se.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.	574	66	62.8	+ 7.4	90	4	33	24	34	66	1.04	-1.22	0.68	0	3	19	7	5	sw.	U. S. Weather Bureau
Division means and extremes																					
...	...	...	...	63.8	+ 7.9	97	5	23	24†	54	...	1.11	-1.47	2.22	0	3	22	6	3	s.	...
Southwestern Division																					
Appleton City	St. Clair	813	43	64.5	+ 5.6	95	5	21	24	60	46	0.52	-2.38	0.38	0	2	25	4	2	sw.	Rolla Brown
Bolivar	Polk	1,071	35	66.4	+ 7.8	93	4†	28	23	39	43	2.01	-1.24	1.55	0	3	25	3	3	s.	Southwest Baptist College
Boonville	Cooper	650	0	66.2 <sup>a</sup>	.....	93	4†	31	24	40	61	0.73	-2.49	0.73	0	2	25	1	5	sw.	Boonville Water Dept.
Clinton	Henry	765	45	65.0	+ 6.1	94	5	22	24	47	51	1.40	-2.05	1.30	0	2	...	...	...	sw.	U. S. Weather Bureau
Dean II	McDonald	1,000	34	64.8	+ 6.1	95	9	20	24	52	39	2.11	-1.78	1.94	0	4	23	7	1	w.	E. S. Taylor
Eldon	Miller	934	43	64.2	+ 6.8	93	5	31	24†	49	39	2.54	-1.16	2.44	0	2	24	6	1	s.	E. H. Shepherd
Garber	Taney	950	4	62.6	.....	96	5	22	24	53	4	1.99	.....	1.15	0	4	24	1	6	e.	William H. Durham
Harrisonville	Cass	904	60	61.3	+ 8.2	94	4†	29	24	57	63	0.20	-2.77	0.11	0	2	17	7	7	sw.	John H. Patterson
Jefferson City	Cole	557	48	63.2	+ 6.4	92	5†	24	24	48	56	1.63	-1.74	1.52	0	2	25	3	3	s.	Mrs. Frank Kliegel
Lakeside	Miller	595	7	63.4	.....	92	4	31	24	49	7	2.29	.....	2.04	...	2	...	...	...	sw.	W. S. Frame
Lamar	Barton	980	50	65.8	+ 6.9	95	5	25	24	58	57	0.76	-2.85	0.70	0	2	27	2	2	sw.	Jesse A. Mann
Lebanon	Laclede	1,265	50	63.8	+ 6.1	91	5	27	24	36	51	2.75	-1.02	1.09	0	3	26	3	2	s.	Mrs. Rosa E. Montelius
Lexington	Lafayette	688	53	64.7	+ 7.2	93	5	32	23†	45	54	1.22	-1.81	1.05	0	3	25	5	1	s.	Miss Carrie Loomis
Lockwood	Dade	1,078	32	66.2	+ 7.5	94	5†	27	23	40	42	2.00	-1.90	1.35	0	3	26	4	1	sw.	Hubert A. Nieman
Marshall	Saline	779	51	66.8	+10.2	93	5	29	24	42	48	0.36	-2.77	0.35	0	2	27	1	3	s.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	37	65.2	+ 7.6	95	5	28	24	40	41	4.16	+0.70	3.48	0	4	27	3	1	se.	Mo. Fruit Exp. Station
Mount Vernon	Lawrence	1,174	26	66.8	+ 8.2	95	4†	25	24	43	38	2.10	-1.28	1.75	0	3	24	5	2	sw.	G. H. Boswell
Neosho	Newton	1,011	51	65.1	+ 5.9	92	1	22	24	47	55	1.10	-2.59	0.79	0	5	25	5	1	sw.	U. S. Fisheries Station
Nevada	Vernon	862	45	66.0	+ 8.4	94	4†	24	23†	46	46	0.55	-2.52	0.55	0	1	25	3	3	sw	T. J. Kaupp
Sedalia	Pettis	910	25	66.8	+ 9.1	94	5	28	24	43	27	1.46	-1.22	1.10	0	3	25	3	3	w.	Mrs. Laura S. Trader
Seligman	Barry	1,542	37	65.8 <sup>b</sup>	+ 6.8	88	3†	27	24	36	35	1.75	-1.71	1.70	0	2	24 <sup>b</sup>	4 <sup>b</sup>	1 <sup>b</sup>	s.	Floyd E. Fawber
Seymour (near)	Webster	1,642	32	63.1	+ 5.7	90	4†	25	24	38	32	3.90	+0.42	3.65	0	3	25	1	5	se.	A. L. Hailey
Springfield	Greene	1,301	50	65.8	+ 7.6	91	5	31	24	36	50	2.86	-0.19	1.78	0	3	26	3	2	se.	U. S. Weather Bureau
Versailles	Morgan	1,037	11	66.3	+ 8.7	95	5	30	23†	44	14	1.20	-2.20	1.10	0	3	28	0	3	s.	I. M. Wilson
Warrensburg	Johnson	878	51	66.6	+ 8.6	94	4†	28	24	43	58	1.61	-1.41	1.56	0	3	26	2	3	se.	E. A. Markey
Warsaw	Benton	687	37	65.0	+ 6.0	93	5†	25	24	55	43	0.19	-3.61	0.13	0	3	26	3	2	e.	Everett Martin
Division means and extremes																					
...	...	...	...	65.2	+ 7.3	96	5	20	24	60	...	1.50	-1.63	3.66	0	3	25	3	3	sw.	...
Southeastern Division																					
Advance	Stoddard	355	1	61.4	.....	96	5	26	24	49	1	0.79	.....	0.77	0	2	...	...	...	.....	U. S. Weather Bureau
</																					



## Daily Precipitation for October 1938

Stations	Drainage-basins	Day of month																															Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Northern Division																																	
Amity	Grand										T.	.04								.10													0.14
Bethany	do											.59			.08		.08																0.67
Bowling Green	Mississippi												T.	.08							1.47												1.55
Brunswick	Grand				.03								T.	.20						.15	1.15												1.53
Canton, Lock No. 20	Mississippi													.31							.89												1.20
Centralia	do													T.							.58												0.58
Chillicothe	Grand												T.	.04						1.62	.19												1.85
Clifton Hill	Chariton												.10							.46													0.56
Columbia	Missouri					T.							.14							.45													0.59
Conception	do				T.			T.				T.					T.																T.
Edgerton	Missouri										.09		.06							T.													0.15
Edina	Mississippi												.15			T.				.33	.31												0.79
Elisberry	do					T.							.08	.30						.30	.30												0.98
Farber	do													.13																			1.59
Fayette	Missouri												.04							.04	.58												1.72
Fulton	do													.05																			0.66
Gallatin	Grand												T.	.20																			2.07
Gorin	Mississippi					T.			T.				.31				T.			1.65													0.31
Grant City	Grand					T.			T.				.17							T.													1.96
Hannibal	Mississippi												.18							.18	.47												0.17
Hermann	Missouri													.20																			0.83
Kahoka	Mississippi						T.							.38			T.			.04	.74												1.67
Kansas City	Missouri					T.	T.				T.	T.	.13							.57													1.16
Kansas City University	do				T.								.15							.44	T.												0.70
Kidder	Grand												T.	.11	.09					.01													0.59
King City	Missouri												T.	.30						.04													0.21
Kirksville	Mississippi								T.				T.	.16						1.43													0.84
La Belle	do																																1.75
Lawson	Missouri												.13							.41													0.67
Linneus	Grand													.27						.72	.78												0.54
Louisiana	Mississippi						.05						.07	.23						1.98													1.77
Lucerne	Grand			T.									.02	.67						1.54													2.33
Macon	Chariton												.09							.12	.81												1.23
Madison	Mississippi												.02																				1.05
Marionville	Missouri					T.			T.			.05	.18																				1.87
Memphis	Mississippi													.31			.13			.04	.58				T.								0.23
Mexico	do					T.								.10																			1.06
Milan	Grand												T.		.19					1.17	.88												1.05
Moberly	Mississippi												.05							.78	.45												2.24
Monroe City	do				.02								.13								.42												1.28
Oregon	Missouri						.08	.14				T.	.06	.06																			0.57
Palmyra	Mississippi													.17																			0.34
Paris	do													.08																			1.80
Perry	do													.10																			1.32
Philadelphia	do													.17																			0.94
St. Charles	Missouri													.07																			1.35
St. Joseph	do				T.															T.	.48												1.55
Saverton, Lock No. 22	Mississippi					.50	.10			.04		T.	.03		.16	.18				.60	.74			T.									0.14
Shelbina	do																																2.32
Shelbyville	do																			2.00	.08												2.08
Stellenville	do																																1.53
Tarkio	Missouri												.22							1.10													1.32
Trenton	Grand												.01	.41						.41													0.13
Troy	Mississippi													.46																			0.83
Unionville	Chariton													.52			.30				.88												1.34
Warrenton	Mississippi												.23	.09						.05	1.07												1.94
Keokuk, Iowa	do				.01			T.					.35	.09						.55	1.67												2.54
Southwestern Division																																	
Altona	Osage												.10							.11													0.21
Appleton City	do												.20							.38													0.58
Bolivar	do												.46							.23	1.32												2.01
Boonville	Missouri																			.10	.63												0.73
Buffalo	Osage																																2.07
Caplitz Mills	do								.01				.62							.46	T.												1.09
Clinton	do												.10																				1.40
Concordia	Missouri																																



## Daily Precipitation for October 1938—Continued from preceding page

Stations	Drainage-basins	Day of month																															Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Southeastern Div.—Concluded																																	
Bragg City	St. Francis																			T.	.78												0.78
Campbell	do																		.01	.36	.04			.01								0.42	
Cape Girardeau	Mississippi																			.91	.06											0.97	
Caruthersville	do																				1.60			.07								1.67	
Centerville	Black												.10							.33												0.43	
Crystal City	Mississippi												.21							.71												0.92	
Cuba	Meramec																			2.00												2.00	
Dexter	St. Francis																			1.30	.09											1.39	
Doniphan	Black																		T.	1.02												1.02	
Farmington	St. Francis													T.						.62	.04											0.66	
Fisk	do																			.11	.32											0.43	
Fredericktown	do																			1.27												1.27	
Goodland	Black													.08						.73												0.81	
Greenville	St. Francis													.04						1.63	.06											1.73	
Jackson	Mississippi																			1.27	.05											1.32	
Jerome	Gasconade													.70						1.53												2.23	
Koshkonong	Black													.04						.35												0.53	
Leeper	do													.07						.54	.20											0.81	
Licking (near)	Gasconade												.30	.04						.09	1.05	T.										1.48	
Marble Hill	Mississippi																			.70												0.70	
Meramec Park	Meramec																			1.25												1.25	
Morehouse	Mississippi																			T.	1.34											1.34	
New Madrid	do																			.07	.68	T.		.06								0.81	
Owensville	Gasconade																			1.28												1.28	
Pacific	Meramec																			1.45												1.45	
Parma	St. Francis																			.88	.12											1.00	
Poplar Bluff	Black																			.68												0.68	
Richwoods	Meramec													.10						.76												0.86	
Rolla	do												.37	.02						.07	.79											1.25	
St. Louis***	Mississippi												.26	.17						.35	.39	T.										1.17	
St. Louis Airport*	Missouri												.12	T.						.67	.33											1.12	
St. Louis University*	Mississippi												.16	.30						.13	.30											0.89	
Salem	Meramec													.16						.87												1.03	
Sikeston	Mississippi																			.71	.55		.03									1.29	
Union	Meramec												.15							.25	1.53											1.93	
Valley Park	do																			.93												1.16	
Van Buren	Black																			.50												0.50	
Washington Univ.	Mississippi													.58						.98												1.56	
West Plains	Black													.03						.04	.73	.04										0.84	
Williamsville	do																			1.86	.34											2.20	
Willow Sprgs. (near)	White													.06						1.13	.12											1.31	
Zalma	Mississippi																															1.16	
Cairo, Ill.***	do													.01						.01	1.12	.01		T.	.01							1.16	

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. ||| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. T. Trace, or less than 0.01 inch.

\*\*\* Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. \*\* Precipitation in the next following measurement; separate dates of fall not recorded. \* Precipitation is for 24-hour period, midnight to midnight. † Estimated. ‡ Partially estimated. |||| Incomplete.

NOTE:—In addition to the stations shown on daily temperature page, records of daily temperatures are kept at the following stations in Missouri: Advance, Appleton City, Bethany, Bolivar, Boonville, Campbell, Canton Lock No. 20, Clifton Hill, Columbia Airport, Conception, Dean, Edgerton, Elsberry, Fulton, Goodland, Greenville, Kansas City University, Kidder, Kirksville Airport, Koshkonong, Lakeside, Licking (near), Lockwood, Marble Hill, Marshall Airport, Mount Vernon, St. Joseph Airport, St. Louis Airport, St. Louis University, Saverton Lock No. 22, Seligman, Seymour (near), Springfield Airport, Steffenville, Tarkio, Versailles, Warsaw, and Washington University.

## Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for October 1938

(See precipitation data in table on preceding page)

Station	Data	Day of month																															Monthly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Columbia.....	Evaporation .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Mean temperature ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Wind movement ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lakeside ..... (Osage Dam)	Evaporation .....	177	168	164	165	158	228	194	139	180	207	237	271	064	179	185	210	183	132	...	181	162	240	166	136	141	145	168	122	116	104	114	5.204
	Mean temperature ..	66	67	68	72	74	70	71	72	70	68	68	66	66	70	72	68	66	64	54	54	58	52	44	48	56	56	56	60	60	59	61	63.4
	Wind movement ..	20	26	9	28	18	24	31	25	15	12	44	48	44	24	26	23	9	35	60	72	50	84	111	80	55	34	32	14	14	15	13	1,096
St. Louis ..... (Washington University)	Evaporation .....	175	147	117	140	160	145	124	161	146	136	184	168	146	154	160	162	144	113	125	165	098	139	135	078	104	141	159	104	064	044	035	4.073
	Mean temperature ..	66	66	66	74	77	65	64	72	73	74	73	68	68	68	74	69	70	74	57	54	58	56	46	46	57	60	56	54	56	54	58	63.6
	Wind movement ..	19	27	14	18	22	40	45	21	17	14	27	23	50	19	22	20	22	8	50	56	28	46	41	29	27	31	29	21	21	8	7	822

Observations taken at 8:00 a. m. except at 7:30 a. m. at Lakeside. For Columbia, Lakeside, and St. Louis (Washington University) descriptions see July 1938, April 1932, and August 1938 reports respectively. \*\*\*\* Evaporation included in next measurement.



## Daily Temperatures for October 1938

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Northern Division																																	
Runswick §§.....	Maximum...	83	84	90	92	94	91	88	90	90	87	86	71	82	92	90	89	72	56	65	76	56	48	65	78	72	73	80	70	75	81	79.3	
Minimum...	54	53	55	58	59	55	55	56	57	57	57	59	48	47	55	57	56	65	43	38	38	42	34	29	29	32	37	36	43	43	45	47.8	
Chillicothe §§.....	Maximum...	81	86	92	94	93	79	91	91	91	87	87	72	83	93	91	89	75	60	66	80	61	48	68	76	73	74	77	72	74	80	79.9	
Minimum...	50	53	58	58	61	63	56	66	58	64	61	62	40	46	58	57	64	60	38	34	40	40	31	29	29	32	35	35	44	37	46	47.3	
Columbia.....	Maximum...	81	82	85	92	92	78	85	89	88	86	87	76	81	91	89	86	87	59	65	75	61	51	64	78	72	71	80	77	73	78	78.5	
Minimum...	54	55	56	63	64	56	57	62	59	62	61	61	50	60	66	59	68	69	46	41	40	39	35	30	33	47	37	47	46	48	51	61.7	
Payette.....	Maximum...	81	82	88	92	93	87	88	89	88	86	87	78	82	91	91	87	87	80	70	65	76	68	50	67	79	72	73	76	74	76	78	80.0
Minimum...	54	54	55	58	65	54	55	68	55	55	66	61	47	64	61	62	51	61	43	36	40	46	33	29	35	50	37	41	44	44	48	49.4	
Grant City.....	Maximum...	80	86	91	95	92	78	89	90	88	82	85	79	81	92	91	89	86	76	59	68	81	69	49	68	80	74	75	79	68	75	79	79.8
Minimum...	51	54	67	60	59	62	55	64	57	55	62	69	40	55	67	69	54	59	33	31	37	38	31	24	31	46	33	43	44	37	46	47.8	
Hannibal.....	Maximum...	77	76	81	92	92	77	76	89	87	85	83	72	79	89	86	83	83	82	67	63	73	66	43	63	74	70	65	70	72	68	76	76.1
Minimum...	51	50	53	60	69	54	51	60	69	61	61	62	50	53	62	56	56	62	42	39	40	42	33	31	35	52	40	40	44	41	41	50.0	
Kansas City.....	Maximum...	80	88	90	92	93	86	90	89	88	84	85	74	83	92	91	90	86	78	55	66	81	60	50	69	83	72	78	78	72	77	80	80.0
Minimum...	54	58	65	70	68	59	69	67	63	63	66	61	49	66	68	65	57	64	41	39	44	40	33	33	45	38	42	49	42	50	52.9		
arksville.....	Maximum...	77	80	...	...	...	75	84	88	88	85	83	76	78	89	89	86	85	71	64	64	76	66	42	62	75	70	68	78	67	72	74	76.4
Minimum...	60	49	...	...	...	56	67	53	54	61	54	53	56	60	42	55	62	50	62	38	35	38	40	32	29	40	45	35	42	45	39	44	47.5
Lawson.....	Maximum...	81	85	88	91	93	82	89	87	87	83	85	74	80	91	90	88	86	78	61	66	80	64	48	68	81	72	75	80	72	75	78	79.3
Minimum...	50	53	58	59	67	53	55	61	60	54	62	60	44	60	63	60	56	60	37	33	40	42	28	27	38	46	40	44	46	41	48	49.8	
Louisiana.....	Maximum...	80	75	78	93	85	73	83	90	93	80	84	83	80	90	87	85	80	62	70	60	53	50	60	75	65	62	70	73	70	73	79	78.0
Minimum...	47	42	47	47	62	51	50	65	62	52	55	55	50	45	46	50	46	42	60	47	45	37	45	38	29	28	45	32	30	34	34	36	44.8
acon§§.....	Maximum...	78	82	88	94	92	74	85	91	90	86	86	72	81	92	92	88	87	72	57	66	76	54	47	65	76	72	71	81	72	73	79	78.0
Minimum...	50	48	52	53	63	51	62	53	55	55	66	61	49	63	59	53	50	52	39	35	39	47	30	29	46	39	39	43	39	41	47.1		
aryville.....	Maximum...	78	83	88	94	85	78	88	89	87	81	85	79	80	91	91	89	85	75	57	64	79	61	46	64	80	71	75	75	68	72	77	79.9
Minimum...	50	54	57	62	60	52	56	55	54	53	60	60	44	56	60	58	52	57	33	30	36	40	31	23	36	45	38	45	45	41	47	48.1	
exico§§.....	Maximum...	82	82	87	95	95	76	86	92	91	89	89	79	81	91	91	90	90	80	62	66	77	60	53	67	77	74	71	77	77	72	82	80.0
Minimum...	50	50	50	58	60	52	52	53	55	57	58	59	47	50	52	45	52	54	43	38	38	42	31	29	20	40	29	30	41	39	43	46.0	
oberly.....	Maximum...	81	71	88	91	91	82	87	89	82	85	85	73	80	84	96	88	87	74	65	64	75	66	46	76	72	69	77	72	61	77	77.4	
Minimum...	50	47	54	58	69	51	52	65	55	54	67	60	40	45	55	52	48	58	45	39	42	41	30	32	40	48	37	40	40	38	46	48.5	
regon.....	Maximum...	82	87	91	96	94	83	88	89	87	80	86	79	83	92	92	90	85	77	60	66	82	67	49	83	72	79	78	68	75	78	80.2	
Minimum...	50	55	60	65	65	65	60	61	61	57	62	65	48	62	66	62	57	57	37	35	40	40	39	28	40	46	42	42	40	40	49	51.6	
St. Charles §§.....	Maximum...	77	80	85	92	93	75	79	94	92	88	90	81	85	93	92	91	90	85	63	68	74	63	55	66	79	76	71	75	70	69	79.7	
Minimum...	56	51	49	55	60	55	52	53	57	58	57	57	56	56	56	50	50	50	55	42	42	51	35	32	33	48	42	37	40	40	49	49.5	
St. Joseph.....	Maximum...	82	87	91	94	93	84	89	88	88	81	84	77	82	91	90	88	85	79	57	66	81	61	49	67	84	72	78	79	71	76	79	79.8
Minimum...	54	67	64	67	70	56	62	61	65	56	64	56	47	64	70	65	58	49	41	38	43	38	34	32	35	49	39	49	49	41	51	52.4	
renton.....	Maximum...	89	84	89	96	93	83	92	91	90	86	87	80	80	92	89	88	76	61	59	66	81	72	58	68	78	79	74	81	78	75	80.5	
Minimum...	53	51	52	58	62	52	56	61	57	56	60	58	44	55	61	55	52	37	36	34	41	40	34	28	29	47	34	40	42	38	44	47.3	
ntonville §§.....	Maximum...	80	86	86	95	91	72	88	92	95	90	90	70	85	92	90	87	72	62	68	82	55	47	70	80	77	71	80	71	71	79	79.5	
Minimum...	49	52	62	57	59	53	53	55	58	57	58	60	44	45	57	56	54	56	36	33	34	39	32	26	27	37	38	39	43	41	41	46.5	
arrenton.....	Maximum...	...	...	82	91	90	86	82	89	91	89	88	79	78	90	91	88	88	80	69	62	71	65	51	60	76	71	68	74	70	77	78.3	
Minimum...	...	...	...	47	58	66	53	51	59	62	58	57	57	51	53	59	54	60	47	40	42	48	32	30	41	53	43	42	50	41	43	50.0	
ookuk, Iowa.....	Maximum...	75	77	82	90	82	67	77	89	88	86	86	73	76	90	88	85	85	73	68	65	72	59	41	61	74	70	64	73	67	74	74.6	
Minimum...	52	52	55	64	56	55	52	63	61	61	63	61	49	59	68	61	56	58	43	39	42	39	34	33	40	60	42	43	45	43	45	51.0	
Southwestern Division																																	
inton.....	Maximum...	81	87	90	93	944																											







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nat. Hist.

THE GREAT SEAL  
JUN 29 1942  
UNIVERSITY OF ILLINOIS

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

# CLIMATOLOGICAL DATA

## MISSOURI SECTION

W. J. MOXOM  
ST. LOUIS, MO.

19

VOL. XLII

NOVEMBER 1938

No. 11

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### GENERAL SUMMARY

The fall drought, which had become quite serious during the preceding two months, was completely broken by the general heavy rains of November 3d-4th and the moisture situation was ample for all requirements throughout the remainder of the month, although insufficient to entirely replenish subsoil deficiency. The scanty water supply for livestock and domestic use was adequately restored by the rains during the month.

The precipitation for the State, as a whole, averaged 4.28 inches, or 1.60 inches more than normal, and it was the first month since June showing an excess. All divisions of the State had excess departures and the distribution was remarkably uniform, the northern division receiving the least amount, 4.01 inches, and the southwestern division receiving the greatest amount, 4.64 inches, while the southeastern division received 4.20 inches. It was the wettest November since 1934, and the fifth wettest of record. All stations in the State had more than normal amounts, except locally in Cape Girardeau, Dunklin, Pemiscot, and McDonald counties, where there was a deficiency. Precipitation occurred generally over the State on the 3d-4th, 6-7th, 13th, 17-18th, 23d, and 26th.

Snowfall averaged 1.3 inches, which is 0.3 inch more than normal. There were two snow periods, the first occurring on the 6-7th and the second on the 22d-24th. Neither of these were general over the entire State, the first missing the eastern and southeastern portions, while the latter occurred mainly in the extreme eastern portion.

The temperature averaged 45.9°, or 1.5° higher than normal, making this the fifth consecutive month with above-normal average. All divisions of the State had excess departures, the northern division showing the greatest excess, 1.5°. A few stations in each division had deficient monthly averages. Maximum readings on the 1st were unusually high, ranging in the eighties generally, while the highest for the month, 89°, was only one degree below the all-time record for November, with records dating back to 1888. Minimum readings were well above the extreme for November. Warm periods were generally, 1st-6th, 11th-21st, and 29-30th, while cold periods occurred generally on the 7-8th, and 22d-27th. The warmest day was the 1st and the coldest was the 27th.

There were no damaging storms, although rather high local winds did some minor damage on the 3d and 4th. River stages were below normal in the major streams of the State, and no floods occurred.

Generally speaking the month was very favorable, and the mild open weather permitted seasonal outdoor activities. Fall sown wheat responded splendidly to the general rains and was in good condition at the close of the month. Corn was mostly out of the fields and livestock were in excellent condition, with an abundance of feed on hand for winter use.—M. R. W.

### TEMPERATURE

The monthly mean temperature for the State, 82 stations reporting, was 45.9°, or 1.5° above normal. The highest monthly mean was 50.9° at Campbell, and the lowest monthly mean was 38.3° at Tarkio. The highest temperature recorded was 89° at Warsaw on the 1st, and the lowest was 2° at Grant

City on the 27th. The greatest daily range was 49° at Harrisonville on the 19th and at Garber on the 28th.

### PRECIPITATION

The average precipitation for the State, 143 stations reporting, was 4.28 inches, or 1.60 inches more than normal. The greatest local monthly amount was 9.26 inches at Richwoods, and the least local monthly amount was 1.90 inches at St. Joseph. The (Continued on page 59)

### PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind				Relative humidity			Percentage of sunshine
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12 noon	6:30 p. m.	
Columbia.....	30.05	30.56	27	29.27	4	9.4	25	s.	3	71	49	52	64
Kansas City.....	30.04	30.59	27	29.47	4	11.4	32	s.	2	67	49	49	70
St. Joseph.....	30.04	30.55	23	29.48	4	9.7	27	s.	2	70	48	49	69
St. Louis.....	30.07	30.52	27	29.20	4	14.1	43	sw.	4	66	50	53	65
Springfield.....	30.07	30.59	27	29.49	17	9.8	25	nw.	13	70	46	54	68
Cairo, Ill.....	30.11	30.55	27	29.43	4	10.0	33	se.	4	72	52	54	68
Keokuk, Iowa..	30.03	30.53	23	29.05	4	9.6	38	s.	4	71	52	59	58

### COMPARATIVE DATA FOR NOVEMBER

Year	Temperature			Precipitation					Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy
1888.....	41.6	87	15	3.39	2.57	2.95	4.64	....	7	..	..	..
1889.....	39.9	76	6	3.52	3.16	3.12	4.29	0.6	5	..	..	..
1890.....	46.5	80	14	2.35	1.96	2.48	2.70	0.6	5	..	..	..
1891.....	39.6	82	-7	4.14	2.67	3.24	6.51	1.0	8	..	..	..
1892.....	40.1	79	-9	2.75	2.17	2.14	3.95	1.0	8	..	..	..
1893.....	40.9	79	-1	1.70	1.32	1.60	2.17	0.3	4	14	9	7
1894.....	41.0	80	-3	1.56	1.59	1.71	1.39	0.3	4	15	9	6
1895.....	41.6	82	-4	3.60	2.62	3.42	4.76	3.2	8	10	7	13
1896.....	42.3	82	-5	2.43	1.47	2.30	3.53	0.2	6	11	7	12
1897.....	43.4	82	-3	2.63	1.92	2.02	3.96	0.2	6	13	8	9
1898.....	39.9	79	-8	2.32	2.03	2.43	2.50	2.3	6	14	8	8
1899.....	49.5	82	-16	2.02	1.38	2.00	2.67	0.2	7	11	9	10
1900.....	43.7	84	7	2.99	1.52	2.71	4.75	0.2	6	15	7	8
1901.....	43.6	84	9	1.48	0.99	1.63	1.82	0.3	4	17	7	6
1902.....	50.1	85	18	3.73	3.05	3.64	4.51	0.4	9	8	9	13
1903.....	40.9	79	2	1.27	1.24	1.09	1.48	1.1	5	13	8	9
1904.....	46.3	83	11	0.22	0.18	0.24	0.24	1.2	2	21	5	4
1905.....	45.8	83	2	1.87	2.36	1.35	1.89	1.7	6	18	6	6
1906.....	42.5	88	-3	3.56	2.55	2.68	5.44	5.0	8	12	6	12
1907.....	43.8	88	11	2.24	1.39	1.91	3.43	0.2	4	19	4	7
1908.....	47.6	87	9	3.90	2.70	4.07	4.33	0.2	8	15	7	8
1909.....	53.6	87	11	4.32	3.92	4.98	4.05	0.4	8	12	7	11
1910.....	42.0	83	11	0.35	0.31	0.22	0.52	0.1	3	15	8	7
1911.....	39.1	83	-3	2.63	2.07	2.78	3.04	1.1	7	13	6	11
1912.....	45.9	85	12	1.50	1.46	1.31	1.73	0.1	3	20	5	5
1913.....	51.7	80	11	2.71	2.61	2.69	2.83	0.1	7	10	8	12
1914.....	48.6	89	2	0.69	0.36	0.64	1.08	0.1	3	19	6	5
1915.....	49.5	87	12	2.33	2.30	2.78	3.42	0.1	5	16	7	7
1916.....	46.9	85	3	2.46	2.25	2.65	2.51	0.1	4	19	4	7
1917.....	46.1	80	8	1.23	0.10	1.61	1.98	0.1	3	14	5	11
1918.....	44.9	85	12	3.26	2.85	4.14	2.78	1.2	6	15	4	11
1919.....	42.2	78	2	3.57	3.06	3.19	4.45	1.0	6	15	5	10
1920.....	40.9	82	6	1.06	1.64	0.82	0.73	0.7	6	12	6	12
1921.....	45.6	84	10	3.11	0.89	1.59	6.85	0.4	5	13	7	10
1922.....	47.8	84	15	3.68	3.70	3.97	3.38	0.4	7	16	6	8
1923.....	45.1	79	14	2.25	1.39	2.79	2.57	3.0	6	15	6	9
1924.....	46.7	88	4	1.78	1.16	2.08	2.09	0.5	4	15	8	7
1925.....	42.8	80	-2	3.05	1.74	2.78	4.63	2.0	6	16	6	8
1926.....	39.6	78	0	3.01	2.13	2.86	4.04	4.3	7	11	7	12
1927.....	46.8	89	12	3.66	2.07	3.78	5.13	0.9	7	6	9	15
1928.....	44.6	79	-9	5.02	5.91	4.88	4.26	0.5	10	13	4	13
1929.....	39.0	78	-8	1.46	1.40	1.00	1.98	2.1	6	11	8	11
1930.....	45.8	83	8	2.93	2.94	3.28	2.56	0.1	5	18	5	7
1931.....	52.2	87	17	5.42	5.58	5.32	5.35	1.4	11	10	5	15
1932.....	39.5	75	-9	1.87	1.55	2.11	1.95	4.5	5	16	5	9
1933.....	45.9	83	7	0.93	0.47	0.96	1.37	0.2	4	16	6	8
1934.....	48.5	84	16	5.71	5.62	5.84	5.67	4.6	10	14	5	11
1935.....	42.2	82	10	4.16	4.15	4.69	3.28	0.1	10	8	4	18
1936.....	42.2	79	0	1.89	1.52	2.04	2.49	1.4	3	21	4	5
1937.....	41.0	90	-7	1.85	1.53	1.87	2.11	4.1	7	15	6	9
1938.....	45.9	89	2	4.28	4.01	4.64	4.20	1.3	6	17	5	8
Period.....	44.4	90	-9	2.68	2.19	2.62	3.22	1.0	6	14	6	10



## Climatological Data for November 1938

Stations	Counties	Elevation, feet	Temperature, in degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observers		
			Length of record, years	Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Length of record, years	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelting	With precip., .01 inch or more	Clear			Partly cloudy	Cloudy
Northern Division																					
Bethany	Harrison	916	43	42.0	- 0.8	84	1	5	27	39	45	2.38	+0.34	1.06	1.0	5	16	9	5	sw.	A. S. Cumming
Brunswick	Chariton	652	57	42.9	+ 1.3	84	1	10	28	45	59	4.15	+1.96	2.05	4.5	4	21	3	6	sw.	O. K. Benecke
Canton, Lock & Dam 20	Lewis	488	0	44.7	.....	82	1	12	27	35	8	4.61	.....	1.92	0	4	15	5	10	s.	Lockmaster
Chillicothe	Livingston	779	29	42.4	+ 1.1	84	1	8	27	41	32	3.65	+1.53	1.94	4.2	5	19	6	5	nw.	Wm. J. Olenhouse
Clifton Hill	Randolph	731	39	45.0	+ 1.6	82	1	8	27	34	29	4.04	+2.06	2.08	4.0	5	16	6	8	sw.	Dr. A. J. Bradsher
Columbia	Boone	740	48	46.0	+ 2.7	84	1	13	27	38	48	4.57	+2.37	2.92	0.3	5	12	8	10	s.	U. S. Weather Bureau
Conception	Nodaway	980	49	41.6	+ 0.2	81	1	4	27	36	54	1.97	+0.23	1.65	T.	4	15	7	8	nw	Fr. Adelm Hess
Edgerton	Platte	856	18	43.0 <sup>a</sup>	+ 1.2	84	1	4	27	42	27	2.71	+0.74	1.62	1.0	4	24	1	5	n.	Fred L. Stiff
Elsberry	Lincoln	449	7	46.0 <sup>a</sup>	.....	83	1	12	27	46	7	3.08	.....	1.30	1.5	4	14	8	7	sw.	Ray E. Mills
Fayette	Howard	760	58	46.0	+ 3.8	80	2	11	27	33	55	4.04	+1.94	2.27	3.5	6	15	9	6	sw.	Morrison Observatory
Fulton	Callaway	818	50	44.7	+ 0.5	81	1	11	27	42	46	3.70	+1.39	1.27	0.4	6	19	1	10	s.	Clyde C. Herring
Gorin	Scotland	700	.....	.....	.....	.....	.....	.....	.....	.....	51	6.79	+4.76	1.75	2.2	5	19	7	4	nw.	W. L. Harker
Grant City	Worth	1,134	34	40.9	- 1.0	84	1	2	27	41	46	2.01	+0.16	1.51	0.8	3	13	13	4	sw.	Howard Rybolt
Hannibal	Marion	759	46	45.0	+ 2.9	83	1	10	27	33	54	4.69	+2.63	2.44	T.	5	12	6	12	sw.	Hannibal Water Dept.
Kansas City	Jackson	741	49	45.2	+ 1.5	82	1	13	24	34	49	2.70	+0.87	1.74	2.0	4	14	6	10	sw	U. S. Weather Bureau
Kansas City University	Jackson	908	0	45.6	.....	84	1	12	24	37	0	2.39	.....	1.40	3.3	4	17	6	7	sw	University of Kansas City
Kidder	Caldwell	1,020	46	43.0	+ 1.2	84	1	7	27	35	50	2.55	+0.40	1.43	2.0	5	17	6	7	nw.	Mrs. Geraldine Terry
King City	Gentry	1,095	.....	.....	.....	.....	.....	.....	.....	.....	12	2.62	+0.66	1.83	1.0	4	11	10	9	sw.	John M. Martin
Kirksville	Adair	1,969	49	43.0	+ 2.4	82	1	8	27	34	56	3.84	+1.72	1.40	5.0	5	9	13	8	nw.	Charles Noble
Lawson	Ray	1,070	0	44.2	.....	84	1	8	27	34	0	2.55	.....	1.13	3.0	4	15	9	6	s.	Elmer E. Lamb
Linneus	Lin.	816	.....	.....	.....	.....	.....	.....	.....	.....	6	3.65	.....	2.00	5.0	4	20	5	5	sw.	H. D. Taggart
Louisiana	Pike	469	44	45.6	+ 1.5	83	1	9	27	48	57	3.68	+1.22	1.60	T.	5	23	4	3	w.	Stark Bro's Nurseries
Macon	Macon	875	39	43.0	+ 0.2	84	1	8	27	41	45	5.24	+3.05	1.86	4.0	4	16	8	6	sw.	Mrs. W. C. Brown
Maryville	Nodaway	1,169	48	40.4	+ 1.0	82	1	5	27	36	44	2.30	+0.38	2.05	1.5	3	16	3	11	nw.	R. B. Montgomery
Mexico	Andrew	800	49	44.6	+ 1.7	83	1	10	27	45	60	4.55	+2.32	1.80	0.5	5	21	2	7	w.	Mrs. Abbie Snoddy
Moberly	Randolph	875	1	45.0	.....	83	1	10	26	33	1	4.13	.....	1.55	0.5	6	15	10	5	sw.	McCormick Hospital
Oregon	Holt	1,048	82	43.0	+ 2.5	81	1	6	27	37	82	2.25	+0.27	1.98	1.0	3	16	10	4	nw.	Miss Mina Wright
St. Charles	St. Charles	520	50	47.6	+ 2.3	83	1	13	27	37	60	3.93	+1.82	1.85	3.5	8	20	4	6	sw	Martin L. Comann
St. Joseph	Buchanan	957	28	43.0	+ 1.5	82	1	11	27	33	66	1.90	+0.32	1.54	T.	4	16	7	7	s.	U. S. Weather Bureau
Steffenville	Lewis	650	40	46.2	+ 2.7	84	1	9	27	41	45	8.83	+6.64	2.75	1.0	6	12	11	7	n.	Frank Hall
Tarkio	Atchison	916	35	38.3	- 1.8	78	1 <sup>†</sup>	5	27	41	44	2.52	+0.78	1.86	0.5	4	16	6	8	nw.	Albert Volker
Trenton	Grundy	822	42	43.8	+ 1.6	84	2	8	27	40	43	2.93	+0.81	1.09	6.0	4	19	6	5	s.	W. H. Estes
Unionville	Putnam	1,062	45	41.4	+ 1.1	85	1	6	27	46	45	4.53	+2.33	1.62	4.0	4	18	5	7	sw.	John H. Schick
Warrenton	Warren	816	56	47.8	+ 4.6	83	1	10	27	34	48	4.20	+1.58	2.25	2.0	7	12	8	10	se.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.	574	66	43.8	+ 2.7	81	1	13	27	36	66	3.57	+1.63	1.68	0.7	6	11	6	13	sw.	U. S. Weather Bureau
Division means and extremes		.....	.....	43.9	+ 1.5	85	1	2	27	48	.....	4.01	+1.82	3.62	2.0	5	16	7	7	sw.	
Southwestern Division																					
Appleton City	St. Clair	813	43	45.0	- 1.0	83	1	9	27	40	46	4.00	+1.70	1.35	4.0	4	18	5	7	sw.	Rolla Brown
Bolivar	Polk	1,071	35	47.6	+ 0.8	82	1	13	27	33	43	4.76	+2.18	2.12	0.5	5	15	5	10	sw.	Southwest Baptist College
Boonville	Cooper	650	0	47.2	.....	84	1	11	27	33	61	5.07	+2.86	1.97	1.0	6	16	4	10	sw.	Boonville Water Dept.
Clinton	Henry	765	45	46.1	- 0.9	84	1	9	27	37	51	3.87	+1.71	2.44	T.	5	.....	.....	.....	.....	U. S. Weather Bureau
Dean	McDonald	1,000	34	46.8	- 2.5	80	1 <sup>†</sup>	6	27	45	39	3.32	-0.03	1.84	T.	5	16	7	7	sw.	E. S. Taylor
Eldon	Miller	934	43	45.4 <sup>a</sup>	+ 0.6	83	1	12	28	47	39	5.76	+3.31	2.62	T.	5	13 <sup>b</sup>	10 <sup>b</sup>	5 <sup>b</sup>	.....	F. H. Shepherd
Garber	Taney	950	4	46.4	.....	83	1	9	27	49	4	7.37	.....	1.87	T.	6	14	6	10	se.	William H. Durham
Harrisonville	Cass	904	60	42.4	- 0.1	83	1	6	27	49	63	2.65	+0.51	1.43	2.5	3	14	7	9	sw	John H. Patterson
Jefferson City	Cole	557	48	44.4	+ 0.3	84	1	11	27	45	56	4.92	+2.53	1.94	0.2	7	19	2	9	w.	Mrs. Frank Kliegel
Lakeside	Miller	595	7	46.4	.....	82	1	18	27	43	7	5.32	.....	2.76	.....	5	.....	.....	.....	sw.	W. S. Frame
Lamar	Barton	980	50	45.3	- 1.0	83	1	12	27	46	57	3.55	+1.02	2.45	T.	5	16	7	7	sw.	Jesse A. Mann
Lebanon	Laclede	1,265	50	4.67	+ 1.1	80	1	10	27	36	51	6.05	+3.41	3.12	0	6	18	3	9	s.	Mrs. Rosa E. Montelius
Lexington	Lafayette	688	53	44.2	0.0	84	1	12	24	41	54	3.36	+1.24	2.18	4.0	4	23	3	4	w.	Miss Carrie Loomis
Lockwood	Dade	1,078	32	46.8	- 0.2	80	1 <sup>†</sup>	12	27	37	42	3.69	+0.85	1.40	1.0	5	20	2	8	sw.	Hubert A. Nieman
Marshall	Saline	779	51	47.2	+ 2.0	84	1	11	27	33	48	4.35	+2.03	2.00	3.0	5	24	2	4	sw.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	37	46.8	+ 0.9	78	1	12	25	37	41	7.41	+4.46	3.92	T.	5	21	2	7	s.	Mo. Fruit Exp. Station
Mount Vernon	Lawrence	1,174	26	47.4	+ 1.6	81	1	12	26	47	37	4.56	+1.62	1.57	0.5	7	18	6	6	sw	G. H. Boswell
Noosho	Newton	1,011	51	48.0	+ 0.7	81	1	9	27	48	55	3.39	+0.09	2.36	T.	5	19	2	9	sw.	U. S. Fisheries Station
Nevada	Vernon	862	45	46.8	+ 2.0	83	1	10	27	39	46	3.35	+1.20	1.75	0	4	16	5	9	sw.	T. J. Kaupp
Sedalia	Pettis	910	25	46.8	+ 3.5	83	1	10	27	35	27	4.08	+2.46	1.65	3.2	6	20	3	7	n.	G. H. Trader
Seligman	Barry	1,542	37	47.0 <sup>a</sup>	- 0.3	78	1	11	27	37	35	6.53	+3.44	2.34	T.	6	17 <sup>b</sup>	11 <sup>b</sup>	10 <sup>b</sup>	w.	Floyd E. Fawver
Seymour (near)	Webster	1,642	32	46.3	+ 0.4	78	1	12	27	39	32	7.18	+4.29	4.37	T.	4	18	3	9	s.	A. L. Hailey
Springfield	Greene	1,301	50	46.2	+ 0.5	79	1	15	27	31	50	5.30	+2.51	3.21	0.2	6	21	1	8	s.	U. S. Weather Bureau
Springsdale	Morgan	1,037	11	48.0 <sup>a</sup>	+ 3.1	83	1	11	27	39	14	5.30	+2.93	3.12	0.8	7	19	1	9 <sup>a</sup>	sw.	I. M. Wilson
Warrensburg	Johnson	878	51	46.2	+ 1.2	83	1	9	27	35	58	3.77	+1.55	1.25	3.0	5	16	8	6	sw.	E. A. Markey
Warsaw	Benton	687	37	47.5	+ 0.3	89	1	8	27	38	43	4.42	+1.78	2.60	2.0	5	18	4	8	n.	Everett Martin
Division means and extremes		.....	.....	46.3	+ 0.6	89	1	6	27	49	.....	4.64	+2.02	4.37	1.0	5	18	4	8	sw.	
Southeastern Division																					
Advance	Stoddard	355	1	46.8	.....	81	1	1													



## Daily Precipitation for November 1938

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Continued on next page



## Daily Precipitation for November 1938—Continued from preceding page

Stations	Drainage-basins	Day of month																														Total		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		..	
Southeastern Div.—Continued																																		
Bragg City	St. Francis				T.	.85			T.	.23				T.						1.00	T.				T.	T.		T.						2.08
Campbell	do				.82			.15						.02					.18	1.82				.50	.02		T.						3.51	
Cape Girardeau	Mississippi				.52			.12						T.					.91	.25				.52	.01		.03	T.					2.36	
Caruthersville	do				.45			.30						.06					.12	.04	1.10			.18	T.		T.						2.25	
Centerville	Black				1.13	1.12		1.34	.28					.01					.48					.10									4.46	
Crystal City	Mississippi				.02	.67		2.66	.38										2.21					.26									5.69	
Cuba	Meramec				1.05	.20		2.02											1.12														4.39	
Dexter	St. Francis				T.	.70			.07					.10					2.30	.70				.72	T.			T.					4.59	
Doniphan	Black				1.08			1.26									.09		.09	.63					.02		T.						4.08	
Farmington	St. Francis				.96			1.44						.05			.01	.02	.35				T.	.16	.04		T.						3.06	
Fisk	do				.37	.46		.13	T.					.08					1.26	.26										.02			2.58	
Fredericktown	do					1.04		.68	.67										.32					T.	.01								2.72	
Goodland	Black				2.26			1.82						.05					.26					.15	.02								4.56	
Greenville	St. Francis				1.50			1.17											.53					.28									3.48	
Jackson	Mississippi				.31			.15											2.21					.40	.05					.20			3.32	
Jerome	Gasconade				1.83	1.40		1.73	.25					.10					.18					T.						.02			5.46	
Koshkonong	Black				2.77			2.6	1.41					.02					.52											T.			4.98	
Leeper	do				.36	1.45		.54	.50					.07					.47	.08				.15	.02					T.			3.64	
Licking (near)	Gasconade				3.12			2.75											.63											T.			6.50	
Marble Hill	Mississippi				.55			.30										.10	.99				.14	.40	.02								2.41	
Meramec Park	Meramec				.70	1.28		2.15	.23										1.24					.06	.04								5.70	
Morehouse	Mississippi				.49			.26						.08					.03	2.96				.62	T.	T.							4.44	
New Madrid	do					.52		.11						.04				T.	T.	.01	1.04			.58	.05			.01					2.36	
Owensville	Gasconade				1.25	1.40		.73															T.										3.38	
Pacific	Meramec				.40	.90		2.00	.35							.10		.05		1.20				.25									5.25	
Parma	St. Francis					.63		.10											1.30	.43				.48									2.94	
Poplar Bluff	Black				.40	.77		.26	.25										1.87	.23				.26	.04	T.			T.				4.08	
Richwoods	Meramec					3.51		2.20	.20					.05					3.10					.20									9.26	
Rolla	do				T.	2.80	.05	2.6	1.55					.07					.55					.05	T.	T.		.01					5.34	
St. Louis	Mississippi				T.	.45		.29	1.79					T.	.04			T.	.77	.39				.21	.10	T.	T.		T.				4.04	
St. Louis Airport	Missouri				T.	.58		.29	1.73					.01	.04				4.4	.38				.27	.16	T.	T.		T.				3.90	
St. Louis University	Mississippi				.50			.30	1.57					T.	.04				.59	.47				.21	.03			T.					3.71	
Salem	Meramec				1.13	1.79		2.60	.18					.10					.57														6.43	
St. Louis	Mississippi				.45			.26						.18					.52					.58	.02								4.64	
Union	Meramec				1.54	.05		1.85						.06					.03	.52				.27									4.72	
Valley Park	do				.05	.80		1.77	.85					.07					1.00					.28	T.			T.					4.82	
Van Buren	Black				2.04			1.34											.34					T.									3.72	
Washington Univ.	Mississippi					.51		1.93	.33					T.	.05				1.00					.25									4.07	
West Plains	Black				T.	.28		.30	1.46					T.	T.				T.	.49				T.	T.			T.					5.06	
Williamsville	do				.39	1.13		.73	.58					.09					.83	.06				.28	.03			.03					4.15	
Willow Sprgs. (near)	White				2.30	1.11		2.58	.05					.02					.78					.01									6.85	
Zalma (near)	Mississippi													T.	.06				1.15	.24				.24	T.		.01							
Calro, Ill.	do				.33			.24											.03	2.25				.06	.24	.01		.03					3.25	

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. **††** Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. **T.** Trace, or less than 0.01 inch.

\*\*\* Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. **\*\*** Precipitation in the next following measurement; separate dates of fall not recorded. **\*** Precipitation is for 24-hour period, midnight to midnight. **†** Estimated. **‡** Partially estimated. **|||||** Incomplete.

NOTE:—In addition to the stations shown on daily temperature page, records of daily temperatures are kept at the following stations in Missouri: Advance, Appleton City, Bethany, Bolivar, Boonville, Campbell, Canton Lock No. 20, Clifton Hill, Columbia Airport, Conception, Dean, Edgerton, Elsberry, Fulton, Goodland, Greenville, Kansas City University, Kidder, Kirksville Airport, Koshkonong, Lakeside, Licking(near), Lockwood, Marble Hill, Marshall Airport, Mount Vernon, St. Joseph Airport, St. Louis Airport, St. Louis University, Saverton Lock No. 22, Seligman, Seymour(near), Springfield Airport, Steffenville, Tarkio, Versailles, Warsaw, and Washington University.

## Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for November 1938

(See precipitation data in daily precipitation table)

Station	Data	Day of month																														Monthly	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		..
Columbia.....	{ Evaporation .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	{ Mean temperature .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	{ Wind movement .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lakeside ..... (Osage Dam)	{ Evaporation .....	166	284	301	...	096	173	...	022	053	163	143	140	149	143	111	106	101	153	091	089	153	204	010	054	...	...	...	...	...	...	...	...
	{ Mean temperature .....	63	72	70	50	58	50	34	40	47	51	58	60	48	44	48	50	56	42	43	50	53	30	32	25	30	26	27	40	45	50	...	3,468
	{ Wind movement .....	39	91	137	89	102	65	76	117	39	66	60	75	87	66	32	53	26	82	104	50	63	112	71	87	61	143	133	24	63	71	...	2,284
St. Louis ..... (Washington University)	{ Evaporation .....	073	075	238	274	046	104	...	012	034	090	145	112	055	090	083	084	079	043	088	069	075	056	...	...	...	...	...	...	...	...	...	2,609
	{ Mean temperature .....	64	68	70	64	56	62	44	37	45	50	58	60	48	47	50	54	53	49	42	50	54	33	32	26	28	24	23	35	49	52	...	47.6
	{ Wind movement .....	20	53	102	109	86	43	50	60	31	50	47	28	74	26	27	32	22	59	108	20	37	115	35	99	74	66	39	24	42	37	...	1,615

Observations taken at 8:00 a. m. except at 7:30 a. m. at Lakeside. For Columbia, Lakeside, and St. Louis (Washington University) descriptions see July 1938, April 1932, and August 1938 reports respectively. \*\*\*\* Evaporation included in next measurement.

## Continued from page 56

greatest amount in any twenty-four hours was 4.37 inches at Seymour(near) on the 3d-4th. The average number of days with 0.01 inch or more of precipitation was 6. The snowfall averaged 1.3 inches, or 0.3 inch more than normal. The greatest monthly snowfall was 6.0 inches at Trenton.

## MISCELLANEOUS PHENOMENA

Aurora.—23d.  
Fog.—Dense, 8th, 16th, 17th, 18th.  
Frosts.—Killing, 7th, 8th.  
Glaze.—6th, 7th.  
Hail.—Light, 1st at Oregon, 6th at Kansas City.  
Halos.—Solar, 6th, 11th, 23d, 25th, 30th; lunar, 1st, 2d, 6th.

Sleet.—6th, 7th, 22d, 23d.

Smoke.—Dense, 1st, 8th.

Thunderstorms.—3d, 4th, 5th, 6th, 7th, 17th, 18th.



Daily Temperatures for November 1938

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	...	Mean																																																																																																																																																																																																																																																																														
Northern Division																																																																																																																																																																																																																																																																																																														
Brunswick §§	Maximum	84	82	75	52	65	45	31	43	61	63	67	70	51	57	59	62	74	42	57	69	64	34	39	28	43	22	35	53	60	58	...	54.8																																																																																																																																																																																																																																																																													
Brunswick §§	Minimum	47	56	64	49	37	37	31	19	19	34	39	40	35	29	32	33	39	41	25	24	36	21	19	15	16	17	11	10	25	32	...	31.0																																																																																																																																																																																																																																																																													
Chillicothe §§	Maximum	84	80	71	54	63	49	29	44	60	64	63	71	54	56	58	62	65	47	59	70	69	34	37	28	44	21	37	54	61	54	...	54.4																																																																																																																																																																																																																																																																													
Chillicothe §§	Minimum	47	59	65	45	36	38	28	12	25	35	39	41	33	28	29	35	41	38	21	29	69	33	16	12	12	10	8	13	25	32	...	30.4																																																																																																																																																																																																																																																																													
Columbia	Maximum	84	80	75	57	70	63	36	22	46	61	63	68	69	52	58	61	62	71	52	57	69	59	33	36	27	40	29	33	55	64	62	...	56.7																																																																																																																																																																																																																																																																												
Columbia	Minimum	59	66	56	40	42	36	26	22	36	35	45	51	36	35	36	47	46	32	26	39	29	26	26	17	21	16	13	25	39	36	...	35.4																																																																																																																																																																																																																																																																													
Fayette	Maximum	78	80	76	59	67	40	37	44	60	64	66	68	64	57	60	61	70	65	57	69	55	33	36	34	19	16	15	11	23	34	35	...	57.8																																																																																																																																																																																																																																																																												
Fayette	Minimum	53	64	56	42	38	36	28	19	31	38	32	45	35	35	36	42	42	41	25	36	41	23	25	15	16	15	11	23	34	35	...	34.1																																																																																																																																																																																																																																																																													
Grant City	Maximum	84	77	73	49	56	47	30	46	59	61	60	72	51	55	54	62	62	52	59	66	55	32	34	12	17	6	14	8	2	61	60	...	53.3																																																																																																																																																																																																																																																																												
Grant City	Minimum	58	63	47	40	33	29	27	18	31	38	32	49	25	23	26	34	42	30	18	32	30	12	17	6	14	8	2	61	60	...	28.6																																																																																																																																																																																																																																																																														
Hannibal	Maximum	83	81	77	70	61	56	39	43	60	61	65	65	64	50	52	62	68	59	63	65	55	48	32	32	39	35	31	52	59	49	...	55.9																																																																																																																																																																																																																																																																													
Hannibal	Minimum	50	64	64	38	38	29	21	32	36	44	51	36	31	31	41	41	40	25	36	47	24	24	14	15	16	10	10	22	34	31	...	34.1																																																																																																																																																																																																																																																																													
Kansas City	Maximum	82	80	72	49	72	45	33	50	60	65	69	69	50	59	63	63	65	49	61	68	60	31	35	28	44	26	40	53	62	59	...	55.0																																																																																																																																																																																																																																																																													
Kansas City	Minimum	64	67	49	41	39	32	27	24	40	43	43	47	38	36	37	42	48	30	29	43	26	19	21	13	24	16	13	29	38	29	...	34.0																																																																																																																																																																																																																																																																													
Kirksville	Maximum	82	79	73	59	60	54	36	38	54	61	70	71	60	53	53	60	65	55	54	65	61	39	36	34	12	17	6	14	8	2	61	...	55.9																																																																																																																																																																																																																																																																												
Kirksville	Minimum	50	65	58	43	35	35	25	16	29	37	41	51	31	25	31	38	37	20	35	39	16	22	12	12	10	8	13	25	32	...	31.1																																																																																																																																																																																																																																																																														
Lawson	Maximum	84	79	74	57	64	58	31	43	59	63	65	69	50	59	63	63	65	49	61	68	60	31	35	28	44	26	40	53	62	59	...	55.9																																																																																																																																																																																																																																																																													
Lawson	Minimum	60	63	56	39	31	25	18	33	39	40	54	31	31	31	33	34	44	35	28	37	34	16	21	10	17	11	10	22	34	31	...	31.1																																																																																																																																																																																																																																																																													
Louisiana	Maximum	88	80	77	70	72	65	43	40	60	60	65	67	65	50	50	55	70	60	70	65	70	60	42	35	32	30	30	50	60	62	...	57.2																																																																																																																																																																																																																																																																													
Louisiana	Minimum	45	60	63	57	46	42	32	26	27	29	42	52	42	30	28	40	38	43	22	29	43	27	26	11	19	14	9	20	26	...	34.1																																																																																																																																																																																																																																																																														
Macou§§	Maximum	84	82	77	52	62	44	35	41	61	63	68	70	51	54	55	62	68	48	57	69	66	33	37	29	41	22	33	51	59	54	...	54.3																																																																																																																																																																																																																																																																													
Macou§§	Minimum	49	59	63	51	37	40	30	16	23	35	38	44	33	27	32	36	42	39	23	28	44	19	18	12	15	13	8	18	25	31	...	31.6																																																																																																																																																																																																																																																																													
Maryville	Maximum	82	77	71	45	57	47	31	47	59	60	57	64	48	54	56	61	64	48	58	66	57	28	31	26	42	28	39	50	57	53	...	52.1																																																																																																																																																																																																																																																																													
Maryville	Minimum	60	65	44	39	34	29	26	18	31	40	33	45	24	25	28	32	40	33	22	30	28	12	18	6	15	8	5	20	28	...	28.8																																																																																																																																																																																																																																																																														
Mexico§§	Maximum	83	82	76	58	68	51	37	48	62	63	66	68	54	59	62	67	72	50	56	68	68	35	36	29	40	25	35	57	64	62	...	56.7																																																																																																																																																																																																																																																																													
Mexico§§	Minimum	44	58	60	55	38	38	33	23	25	34	36	45	34	32	33	37	43	42	24	26	40	32	24	15	15	17	10	12	25	...	32.6																																																																																																																																																																																																																																																																														
Moberly	Maximum	83	78	72	60	64	60	40	59	60	65	65	65	61	65	54	60	59	70	60	55	68	63	48	35	33	39	36	29	50	58	...	55.9																																																																																																																																																																																																																																																																													
Moberly	Minimum	55	62	56	40	36	35	26	18	30	35	45	55	36	30	40	42	44	40	26	35	45	22	23	14	16	10	10	26	38	...	34.2																																																																																																																																																																																																																																																																														
Oregon	Maximum	81	78	72	45	58	50	32	50	59	63	58	64	53	57	62	63	61	62	65	68	60	30	30	30	30	30	43	54	59	54	...	54.2																																																																																																																																																																																																																																																																													
Oregon	Minimum	62	65	44	38	35	29	26	20	38	42	45	51	29	31	32	36	46	32	27	40	30	13	19	7	21	9	6	23	34	26	...	31.9																																																																																																																																																																																																																																																																													
St. Charles §§	Maximum	83	80	79	61	71	71	41	50	60	63	74	66	56	63	66	68	68	63	66	68	63	56	69	67	31	34	31	29	35	67	64	...	58.2																																																																																																																																																																																																																																																																												
St. Charles §§	Minimum	49	58	63	60	48	48	40	28	30	35	42	51	41	32	34	43	40	47	29	32	43	29	28	22	17	22	13	20	32	...	37.0																																																																																																																																																																																																																																																																														
St. Joseph	Maximum	82	78	68	45	62	40	33	50	60	63	62	65	49	57	62	62	64	47	61	68	65	31	32	28	43	24	41	54	59	56	...	53.3																																																																																																																																																																																																																																																																													
St. Joseph	Minimum	63	61	44	40	36	30	27	26	39	44	39	44	34	34	37	38	47	30	28	40	23	16	19	11	21	12	11	24	36	...	32.8																																																																																																																																																																																																																																																																														
Trenton	Maximum	78	84	75	64	59	50	34	45	58	61	61	70	62	56	58	62	72	61	58	69	60	51	40	30	32	28	34	54	60	62	...	56.3																																																																																																																																																																																																																																																																													
Trenton	Minimum	59	56	60	44	36	30	27	18	28	34	41	49	33	28	33	34	41	34	22	33	36	15	20	12	20	11	8	23	34	22	...	31.3																																																																																																																																																																																																																																																																													
Unionville §§	Maximum	85	79	77	56	59	46	36	42	59	66	62	73	54	57	55	64	69	46	57	70	61	35	38	32	49	23	35	52	60	57	...	55.1																																																																																																																																																																																																																																																																													
Unionville §§	Minimum	45	56	62	49	35	36	20	14	15	31	40	40	29	25	25	31	35	35	23	26	37	14	10	10	10	10	6	2	27	...	27.6																																																																																																																																																																																																																																																																														
Warrenton	Maximum	83	79	77	72	70	72	51	44	60	63	70	66	65	58	63	62	70	61	53	69	67	50	33	30	39	36	31	55	64	60	...	59.4																																																																																																																																																																																																																																																																													
Warrenton	Minimum	50	60	64	41	39	51	32	24	30	35	46	58	37	33	38	40	40	44	26	41	45	27	26	18	14	19	10	21	35	40	...	36.1																																																																																																																																																																																																																																																																													
Keokuk, Iowa	Maximum	81	79	76	60	57	55	36	39	60	62	65	68	48	51	49	59	59	49	54	67	65	33	36	26	41	28	32	50	57	60	...	53.1																																																																																																																																																																																																																																																																													
Keokuk, Iowa	Minimum	56	66	69	45	42	36	29	23	35	38	46	47	34	31	37	40	46	32	27	39	29	21	24	15	19	14	13	26	37	29	...	34.5																																																																																																																																																																																																																																																																													
Southwestern Division																																																																																																																																																																																																																																																																																																														
Clinton	Maximum	84	82	74	58	74	65	36	49	63	66	72	68	64	60	64	65	74	66	60	69	63	45	35	32	39	32	38	48	62	61	...	58.9																																																																																																																																																																																																																																																																													
Clinton	Minimum	57	63	56	40	37	35	26	16	33	37	39	54	35	29	31	40	39	36	23	35	44	21	24	14	18	16	9	26	35	32	...	33.3																																																																																																																																																																																																																																																																													
Eldon§§	Maximum	83	80	73	55	73	53	40	50	63	67	76	69	55	60	65	65	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	

\* , \* , etc., indicate respectively, 1, 2, 3, etc., days missing from the record.  
 to the preceding day on which it almost always occurs.      † Estimated.      §§ Instruments are read in the morning; the maximum temperature then read is charged  
 WBO, St. Louis, 12-20-28-1055.







## CLIMATOLOGICAL DATA

## MISSOURI SECTION

W. J. MOXOM  
ST. LOUIS, MO.

Vol. XLII

DECEMBER 1938

No. 12

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR

## GENERAL SUMMARY

The almost complete lack of snow covering and the effect on winter grains was the most disturbing feature of the moisture situation for the month. The average snowfall for the State was 0.2 inch, although measurable amounts occurred almost exclusively in the northern division and at less than half of the reporting stations in that division. Only a few stations outside the northern division reported a measurable amount of snow.

While the average precipitation for the State was 1.83 inches, or 0.33 inch less than normal, there have been only 20 Decembers during the last 50 years with less precipitation. However, the amounts were well distributed throughout the month and were generally sufficient for livestock and domestic uses, but inadequate to replace subsoil moisture lost during the fall drought. In some localities in the extreme northwest portion of the State the water shortage was becoming acute at close of month.

Mild temperature prevailed through most of the month with the average for all sections of the State above normal. During the last 50 years there have been only 19 Decembers with average temperature higher than that of December, 1938.

The month was favorable for practically all farm activities and winter grains made fair progress.

## TEMPERATURE

The monthly mean temperature for the State, 84 stations reporting, was 35.9°, or 1.8° above normal. The highest monthly mean was 42.2° at Doniphan, and the lowest monthly mean was 29.8° at Memphis and Tarkio. The highest temperature recorded was 72° at Doniphan on the 11th, and the lowest was 2° at Conception and Grant City on the 27th and 30th and at Unionville on the 27th, 28th and 30th. The greatest daily range was 49° at Chillicothe on the 31st.

## PRECIPITATION

The average precipitation for the State, 144 stations reporting, was 1.83 inches, or 0.33 inch less than normal. The greatest local monthly amount was 3.70 inches at Monroe City, and the least local monthly amount was 0.27 inch at Maryville. The greatest amount in any twenty-four hours was 2.27 inches at Mexico on the 2-3d. The average number of days with 0.01 inch or more of precipitation was 6.

The snowfall averaged 0.2 inch, or 3.1 inches less than normal. The greatest monthly amount was 5.0 inches at Kahoka.

## MISCELLANEOUS PHENOMENA

Fog.—Dense, 1st, 2d, 3d, 11th, 22d, 23d, 24th, 26th.

Glaze.—22d.

Hail.—Light, 2d at Fulton, Lawson, Versailles, Willow Springs, 22d at Edgerton; heavy, 2d at Columbia, Brunswick, Appleton City.

Halos.—Solar, 7th, 10th, 11th, 12th, 25th, 29th, 30th; Lunar, 3d, 4th, 6th, 7th, 10th, 12th, 28th.

Sleet.—8th, 9th, 16th, 21st, 22d, 26th, 27th, 29th.

Thunderstorms.—Local, 3d, 8th; more or less general 2d.

Windstorms.—No damaging windstorms reported.

## ERRATA

November 1938, page 57: Snowfall at Clinton should be 2.5; precipitation at Advance should be 2.39; average snowfall for southwestern division should be 1.1. Page 58: Precipitation on 17th at Advance should be .03, total should be 2.39. Page 60: Minimum temperature on 21st at West Plains should be 30.

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind				Relative humidity			Percentage of sunshine
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12 noon	6:30 p. m.	
Columbia.....	30.08	30.61	27	29.66	4	8.2	25	nw.	26	77	62	61	52
Kansas City.....	30.09	30.64	27	29.62	4	8.9	33	nw.	26	74	54	56	70
St. Joseph.....	30.08	30.62	27	29.66	4	8.9	34	nw.	26	79	52	57	65
St. Louis.....	30.09	30.65	28	29.65	3	11.6	32	nw.	26	70	57	62	44
Springfield.....	30.10	30.64	27	29.71	4	9.0	27	nw.	27	74	58	60	63
Cairo, Ill.....	30.12	30.66	28	29.68	26	8.8	27	se.	3	76	57	59	49
Keokuk, Iowa..	30.08	30.62	27	29.65	4	7.6	29	w.	26	79	62	64	47

## COMPARATIVE DATA FOR DECEMBER

Year	Temperature			Precipitation						Number of day			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy	
1888.....	35.9	70	0	2.43	1.88	3.03	2.39	...	6	...	...	...	...
1889.....	46.8	80	—	1.09	0.60	0.85	1.82	0.1	3	...	...	...	...
1890.....	36.0	76	—	1.18	0.82	1.14	1.57	4.6	3	...	...	...	...
1891.....	39.8	72	—	1.88	1.91	1.67	2.05	...	6	...	...	...	...
1892.....	29.4	75	—	2.50	1.69	2.76	3.04	4.8	6	...	...	...	...
1893.....	35.2	76	—	0.97	0.80	0.67	1.44	2.7	5	11	11	9	9
1894.....	36.7	75	—	2.41	1.19	2.33	3.70	1.3	5	14	8	9	9
1895.....	34.3	69	—	6.40	5.12	8.57	5.50	3.4	8	9	8	14	10
1896.....	38.6	79	—	0.92	0.84	1.17	0.75	T.	3	13	8	8	10
1897.....	29.3	74	—	3.03	1.92	2.98	4.19	6.3	7	8	8	15	15
1898.....	28.7	74	—	1.65	1.62	1.84	1.48	5.1	5	17	6	8	8
1899.....	30.4	75	—	1.3	2.22	1.90	2.02	2.74	6.6	9	12	9	9
1900.....	35.6	68	—	0.79	0.47	0.55	1.35	0.6	4	14	8	9	9
1901.....	28.5	71	—	3.20	2.26	2.98	4.35	6.9	8	11	7	13	13
1902.....	30.7	68	—	3.32	2.02	2.76	5.18	3.1	8	10	4	17	17
1903.....	30.2	65	—	1.70	1.05	1.56	2.49	2.3	5	16	7	8	8
1904.....	32.9	75	—	1.55	1.56	1.24	1.84	6.0	5	16	7	8	8
1905.....	33.3	66	—	2.17	0.79	1.44	2.89	1.7	4	18	6	7	7
1906.....	36.1	73	0	2.52	1.67	1.85	4.05	0.6	8	8	6	17	17
1907.....	37.7	76	3	1.75	1.22	1.69	2.34	3.7	7	11	7	13	13
1908.....	38.4	80	—	0.78	0.54	0.94	0.86	T.	3	16	7	8	8
1909.....	24.9	76	—	2.87	2.82	2.80	3.00	7.7	8	12	6	13	13
1910.....	31.2	67	—	1.49	0.94	1.14	2.40	2.4	4	16	5	10	10
1911.....	36.7	74	—	2.85	2.74	2.56	3.26	5.1	7	13	6	12	12
1912.....	36.5	72	—	0.62	0.54	0.49	0.82	0.6	3	19	5	7	7
1913.....	38.3	74	—	2.26	2.11	2.84	1.83	6.6	7	9	4	18	18
1914.....	26.8	68	—	2.51	1.69	2.20	3.65	6.6	9	7	5	19	19
1915.....	34.7	68	—	2.99	1.48	2.45	5.03	7.8	6	12	6	13	13
1916.....	31.3	82	—	1.92	0.78	1.54	3.44	4.4	6	15	6	10	10
1917.....	25.5	82	—	0.76	0.41	0.75	1.13	7.3	5	11	7	13	13
1918.....	40.0	83	—	3.23	2.27	2.81	4.62	7.8	7	13	6	12	12
1919.....	28.5	74	—	0.72	0.41	0.66	1.08	0.7	3	12	4	15	15
1920.....	35.6	77	—	2.12	1.25	1.49	3.61	2.3	5	13	7	11	11
1921.....	36.9	74	—	1.97	1.26	2.00	2.65	1.9	6	13	7	11	11
1922.....	36.3	75	—	2.27	0.75	1.71	4.35	0.2	6	15	6	10	10
1923.....	41.0	82	—	3.07	1.63	2.96	4.62	0.8	8	11	6	14	14
1924.....	27.7	80	—	3.48	2.94	3.45	4.06	4.6	7	13	6	12	12
1925.....	31.6	69	—	1.43	1.53	1.27	1.50	4.8	4	13	7	11	11
1926.....	82.6	75	—	2.16	1.17	2.12	3.20	2.4	6	11	5	15	15
1927.....	29.9	74	—	2.81	1.64	2.55	4.23	2.9	6	15	5	11	11
1928.....	36.2	81	0	2.29	1.37	2.49	3.00	1.4	5	14	6	11	11
1929.....	35.2	76	—	1.74	0.67	1.11	3.43	3.7	6	13	5	13	13
1930.....	34.2	70	—	1.24	0.79	1.35	1.57	1.9	5	15	6	10	10
1931.....	42.7	80	11	2.71	2.53	1.51	4.10	1.7	8	11	6	14	14
1932.....	31.2	77	—	4.74	3.18	4.98	6.07	5.7	7	12	6	13	13
1933.....	39.1	78	—	1.92	1.52	1.67	2.56	0.4	5	12	7	12	12
1934.....	31.6	69	—	1.80	0.94	1.72	2.74	5.0	7	10	6	15	15
1935.....	30.7	66	—	1.20	0.85	1.03	1.73	2.8	6	11	7	13	13
1936.....	38.4	69	—	2.83	2.19	2.71	3.60	2.2	7	12	7	12	12
1937.....	32.0	66	—	2.24	1.50	1.90	3.32	0.6	9	8	6	17	17
1938.....	35.9	72	2	1.83	1.66	1.52	2.32	0.2	6	15	7	9	9
Period.....	34.1	83	—29	2.16	1.52	2.04	2.92	3.3	6	13	6	12	12



## Climatological Data for December 1938

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Greatest daily range	Precipitation, in inches				Number of days			Prevailing direction of wind	Observers		
				Mean	Departure from the normal	Highest	Date	Lowest	Date		Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelted	With precip., .01 inch or more	Clear	Partly cloudy			Cloudy	
Northern Division																					
Bethany	Harrison	916	43	31.6	+ 1.5	56	1	3	30	40	45	0.87	-0.28	0.77	1.0	2	16	8	7	nw.	A. S. Cumming
Brunswick	Chariton	652	57	33.0	+ 2.4	57	3	8	30†	48	59	1.36	-0.31	0.78	T.	5	17	3	11	nw.	O. K. Bevecke
Canton, Lock & Dam 20	Lewis	488	0	32.1	.....	54	4	6	27	35	8	1.41	.....	0.70	0.5	6	14	5	12	nw.	Lockmaster
Chilliothe	Livingston	779	29	32.7	+ 2.8	58	3	5	30	49	32	1.05	-0.37	0.76	0	4	21	3	7	nw.	Wm. J. Olenhouse
Clifton Hill	Randolph	731	39	33.2	+ 2.2	57	2	5	30	40	29	1.78	+0.06	1.00	T.	4	11	10	10	nw.	Dr. A. J. Bradsher
Columbia	Boone	740	48	35.6	+ 2.4	61	1	10	30	34	48	3.22	+1.36	2.15	T.	7	10	9	12	w.	U. S. Weather Bureau
Coneption	Nodaway	980	49	31.4	+ 2.2	56	3	2	27†	41	54	0.53	-0.35	0.41	T.	3	14	11	6	nw.	Fr. Adelhelm Hess
Edgerton	Platte	856	18	34.0	+ 3.6	59	31	4	30	45	27	0.57	-0.55	0.31	0	6	22	2	7	n.	Fred L. Stiff
Elsherry	Lineoli	449	7	33.1	.....	59	1	9	30	38	7	2.74	.....	0.84	0	7	10	12	9	nw.	Ray E. Mills
Fayette	Howard	760	58	35.2	+ 4.1	58	1	8	30	40	55	1.57	-0.09	0.77	T.	6	15	7	9	w.	Morrison Observatory
Fulton	Callaway	818	50	33.8	+ 0.3	64	1	10	27†	44	46	3.05	+1.04	2.06	T.	7	15	6	10	w.	Clyde C. Herring
Graut City	Worth	1,134	34	31.4 <sup>a</sup>	+ 3.4	56	3	2	27†	33	46	0.43	-0.63	0.21	0.2	3	12	8	11	sw	Howard Rybolt
Hannibal	Marion	759	46	31.7	+ 0.2	54	2	5	27	35	54	2.50	+0.90	1.16	0.2	7	13	3	15	nw.	Hannibal Water Dept.
Kansas City	Jackson	741	49	36.1	+ 3.6	61	3	9	27	32	49	0.55	-0.78	0.35	T.	4	13	10	8	sw.	U. S. Weather Bureau
Kansas City University	Jackson	908	0	36.6	.....	62	3	7	30	41	0	0.31	.....	0.18	0	5	18	8	5	nw.	University of Kansas City
Kidder	Caldwell	1,020	46	32.4	+ 3.2	56	3	5	27†	37	50	0.89	-0.38	0.35	0	5	21	0	10	nw.	Mrs. Geraldine Terry
King City	Gentry	1,095	.....	.....	.....	.....	.....	.....	.....	.....	12	0.72	-0.36	0.58	0	5	11	15	5	nw.	John M. Martin
Kirksville	Adair	969	49	31.2	+ 1.6	51	3	4	27†	36	56	1.42	-0.34	0.81	2.0	3	13	8	10	nw.	Charles Noble
Lawson	Ray	1,070	0	34.0	.....	58	1†	5	30	39	0	1.37	.....	0.96	T.	5	15	8	8	nw.	Elmer E. Lamb
Linneus	Linn	816	.....	.....	.....	.....	.....	.....	.....	.....	6	1.20	.....	0.61	T.	6	18	6	7	nw.	H. D. Taggart
Louisiana	Pike	469	44	33.2	+ 1.4	60	2	9	27	41	57	3.65	+1.75	2.00	0.1	9	18	3	10	w.	Stark Bro's Nurseries
Macon	Macon	875	39	31.8	+ 1.7	54	2†	5	27†	47	45	1.46	-0.18	0.80	T.	5	16	8	7	w.	Mrs. W. C. Brown
Maryville	Nodaway	1,169	48	30.8	+ 4.0	55	3	3	27†	38	44	0.27	-0.81	0.18	0.5	5	17	2	12	nw.	R. B. Montgomery
Memphis	Scotland	787	0	29.8	.....	50	2†	3	27†	45	8	0.88	.....	0.35	3.5	4	.....	.....	.....	nw.	John W. Alexander
Mexico	Audrain	800	49	33.7	+ 1.9	60	1	7	30	48	60	3.23	+1.32	2.27	T.	8	.....	.....	.....	w.	Mrs. Abbie Snoddy
Moberly	Randolph	875	1	33.8	.....	58	1	6	30	37	1	1.74	.....	0.90	T.	4	13	8	10	sw.	McComick Hospital
Oregon	Holt	1,018	82	33.6	+ 4.9	59	3	4	27	36	82	0.43	-0.61	0.24	T.	4	14	12	5	nw.	Miss Mina Wright
St. Charles	St. Charles	520	50	35.4	+ 0.5	61	1	12	30	44	60	2.66	+0.87	1.58	T.	6	11	10	10	sw.	Martin L. Comann
St. Joseph	Buchanan	957	28	34.4	+ 4.8	57	3	6	27	33	66	0.65	-0.64	0.53	T.	4	17	8	6	nw.	U. S. Weather Bureau
Steffenville	Lewis	650	40	32.2	+ 1.6	65	2	5	27†	38	45	1.46	-0.23	0.38	2.5	7	12	11	8	n.	Frank Hall
Tarkio	Atchison	916	35	29.8	+ 3.4	53	3	3	27†	32	44	0.54	-0.42	0.36	1.0	3	16	9	6	ne.	Albert Volker
Trenton	Grundy	822	42	33.8	+ 4.2	58	1†	5	29	38	43	0.98	-0.43	0.42	0.5	4	11†	14†	5†	s.	W. H. Estes
Unionville	Putnam	1,062	45	31.4	+ 3.8	57	3	2	27†	48	45	0.94	-0.77	0.47	3.0	4	12	8	11	nw.	John H. Schick
Warrenton	Warren	816	56	35.5	+ 3.1	61	1	9	27†	37	48	3.67	+1.59	2.20	T.	8	11	9	11	nw.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.	574	66	31.4	+ 1.8	56	2	4	27†	31	66	1.15	-0.30	0.42	2.6	6	8	15	15	nw.	U. S. Weather Bureau
Division means and extremes																					
.....	.....	.....	.....	33.0	+ 2.6	65	2	2	27†	49	.....	1.66	+0.14	2.27	0.5	5	14	8	9	nw.	.....
Southwestern Division																					
Appleton City	St. Clair	813	43	36.9	+ 2.3	61	2	10	27†	37	46	1.61	+0.02	1.01	T.	4	22	1	8	nw.	Rolla Brown
Bolivar	Polk	1,071	35	39.4 <sup>a</sup>	+ 3.8	66	2	9	27†	41	43	1.69	-0.65	0.61	0	6	14	10	7	w.	Southwest Baptist College
Boonville	Cooper	650	0	33.8	.....	60	1	9	27†	44	61	1.73	+0.03	1.24	T.	6	12	9	10	w.	Boonville Water Dept.
Clinton	Henry	765	45	37.2	+ 2.5	64	2	9	27	37	51	2.43	+0.56	1.88	T.	6	.....	.....	.....	.....	U. S. Weather Bureau
Dean H.	McDonald	1,000	34	39.2	+ 1.7	69	2	10	27	40	39	1.59	-0.76	0.48	T.	4	16	11	4	w.	E. S. Taylor
Eldon	Miller	934	43	35.8	+ 1.5	65	2	9	28	47	39	2.22	+0.46	1.35	T.	6	12	13	6	se.	E. H. Shepherd
Garber	Taney	950	4	37.8	.....	67	2	7	28	46	4	0.80	.....	0.21	T.	6	12	7	12	nw.	William H. Durham
Harrisonville	Cass	904	60	34.4	+ 3.1	62	3	6	30	48	63	0.50	-0.95	0.22	T.	4	16	5	10	nw.	John H. Patterson
Jefferson City	Cole	557	48	34.4	+ 1.5	62	1	9	27†	45	56	2.74	+0.80	1.76	T.	7	19	7	5	w.	Mrs. Frank Kliegel
Lakeside	Miller	595	7	36.6	.....	67	2	13	28	42	7	2.40	.....	1.40	.....	7	.....	.....	.....	sw	W. S. Frame
Lamar	Barton	980	50	38.1	+ 2.9	69	2	11	27†	39	57	1.25	-0.63	0.50	0	6	18	6	7	nw.	Jesse A. Mann
Lebanon	Laclede	1,265	50	37.2	+ 2.4	64	2	10	27	35	51	2.15	-0.13	0.76	0	6	16	8	7	w.	Mrs. Rosa E. Montelius
Lexington	Lafayette	688	53	35.6	+ 3.6	60	3	7	30	48	54	0.96	-0.63	0.45	0	5	15	11	5	w.	Miss Carrie Loomis
Lockwood	Dade	1,078	32	39.4	+ 3.3	62	3	10	27†	30	42	1.82	-0.82	0.43	0	6	17	9	5	nw.	Hubert A. Nieman
Marshall	Saline	779	51	35.8	+ 3.9	58	3	9	27	37	48	0.94	-0.81	0.79	T.	4	24	1	6	sw.	See Chamber of Commerce
Mountain Grove	Wright	1,463	37	38.2	+ 3.5	63	2	10	27	30	41	1.63	-0.78	0.61	T.	6	15	10	6	se.	Mo. Fruit Exp. Station
Mount Vernon	Lawrence	1,174	26	39.9	+ 4.4	68	31	10	27	44	38	1.14	-1.40	0.30	0	5	9	17	5	nw	G. H. Boswell
Neosho	Newton	1,011	51	39.4	+ 2.3	68	2	11	27	36	55	1.12	-1.16	0.40	0	7	18	2	11	nw.	U. S. Fisheries Station
Nevada	Vernon	862	45	39.3	+ 4.0	68	2	10	27	32	46	.....	.....	.....	0	.....	19	3	9	sw.	T. J. Kaupp
Sedalia	Pettis	910	25	37.5	+ 3.6	64	2	10	27†	35	27	1.87	+0.59	1.02	T.	6	21	3	7	nw.	G. H. Trader
Seligman	Barry	1,542	37	40.7 <sup>a</sup>	+ 3.4	67	2	9	27	.....	35	0.68	-1.52	0.37	0	3	14 <sup>a</sup>	6 <sup>a</sup>	4 <sup>a</sup>	nw.	Floyd E. Fawver
Seymour (near)	Webster	1,642	32	37.0	+ 1.6	62	2	9	27†	30	32	1.46	-0.80	0.53	T.	6	17	6	8	nw.	A. L. Hailey
Springfield	Greene	1,801	50	38.2	+ 2.0	66	2	11	27	26	50	1.28	-1.03	0.50	0.3	6	16	7	8	w.	U. S. Weather Bureau
Versailles	Morgan	1,037	11	37.4	+ 2.0	67	2	9	27	39	14	3.23	+1.36	1.14	0.1	6	17	6	8	nw.	I. M. Wilson
Warrensburg	Johnson	878	51	36.6	+ 3.2	61	2	9	27†	35	58	0.79	-0.75	0.48	T.	3	15	7	9	uw.	E. A. Markey
Warsaw	Benton	687	37	37.4	+ 1.7	68	2	10	27†	42	43	2.66	+0.54	1.49	T.	7	18	6	7	se.	Everett Martin
Division means and extremes																					
.....	.....	.....	.....	37.4	+ 2.8	69	2	6	30	48	.....	1.52	-0.52	1.88	T.	5	17	7	7	nw.	.....
Southeastern Division																					
Advance	Stoddard	355	1	37.5	.....	65	4	12	28	36	1	2.17	.....	1.06	T.	8	.....	.....	.....		



## Daily Precipitation for December 1938

Stations	Drainage-basins	Day of month																															Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Northern Division																																		
Amity	Grand		.58	.10	T.	T.			.02	T.														T.	.15				T.				0.85	
Berlin	do		.77		T.																		.10	.25									0.87	
Bowling Green	Mississippi			2.11					.12	.46							.09							.25	.25		.04	.26					3.17	
Brunswick	Grand		.75						.18															.17	.25			.17					1.36	
Canton, Lock No. 20	Mississippi		.70			.02	.02		.18															.30	.14			T.	.35				1.41	
Centralia	do		1.64						.09															.30	.14			.25					2.28	
Clinton Hill	Grand		.06	.76	T.	T.			T.														T.	.19			.04	T.					1.05	
Columbia	Chariton		1.00			T.	T.		.15														.36	.27			.27						1.78	
Columbus	Missouri		1.94	.67		T.			.14								.02						.18	.01			.26						3.22	
Conception	do		.41			.01			T.														.11	.01			T.						0.53	
Edgerton	Missouri		.31			.03	.03		.07														.09				.04						0.57	
Edina	Mississippi			.42			T.		.07															.09	.09			.25					0.83	
Elberly	do		.70	.84					.41									.21					.31	.07			.20						2.74	
Farber	do			2.26						.24							.06							.13			.06	.08						2.83
Flattie	Missouri		.77	.25		T.			.09														.21	.02			.23						1.57	
Flattie	do		.21	2.06					T.	.06							T.	.10						.30	.14		.18						3.05	
Gallatin	Grand			.21					.06															.08			.25						0.60	
Gorin	Mississippi		.36			T.	T.		.16														.22				.26						1.00	
Grant City	Grand		.21			T.	T.																.20	.02		T.	T.						0.43	
Hannibal	Mississippi		.60	1.16		T.		.01	.16								.05						.25	T.		.27							2.50	
Hermann	Missouri			2.15						.05								.34						.37			.07	.03					3.01	
Kahoka	Mississippi	T.		.38			T.		.08															.30				.35					1.11	
Kansas City	Missouri		.35			T.			.02														T.	.12			.06						0.55	
Kansas City University	do		.04			T.	T.			.01													.17	.01		.08							0.31	
Kidder	Grand		.14	.35	T.				.07															.22			.11						0.89	
King City	Missouri		.58			.02	.04																.06			.02							0.72	
Kirksville	Mississippi		.81			T.			T.														.40			.21	T.						1.42	
La Belle	do			.48					.11															.10			.23						0.92	
Lawson	Missouri		.96			.02	T.		.20														.12			.07							1.37	
Linneus	Grand		.12	.49		T.			.11															.25			.14	.09					1.20	
Louisiana	Mississippi		1.00	1.00				.05	.33								.30							.37	.60		.10						3.65	
Lucerne	Grand		.36	.42			.03		.22								.19						.19			.10	T.						1.32	
Macon	Chariton			.30					.18	T.														.25			.19	.04					1.46	
Madison	Mississippi		.12			.02			.03															.18			.22						1.57	
Maryville	Missouri		.18			.01	.02		.01														.05				T.						0.27	
Memphis	Mississippi	T.		.35		T.			.17		.21												.18			T.	.18						0.88	
Mexico	do		.05	2.22					.05	.21							.05							.35	.05	.25							3.23	
Miami	Grand		.08	.63	.07				.18	.07														.20	.12	.10							1.45	
Moberly	Mississippi		.90			T.	T.		.17														T.	.32	.35								1.74	
Monroe City	do		.62	1.09					1.37															.32	.35								3.70	
Oregon	Missouri		.24		.06	T.			.09														.04			.20		.27					0.43	
Palmyra	Mississippi	T.	1.60			T.	T.		.20								.02							.20			.27						0.43	
Paris	do		.15						.08	.09								T.						.29			.15	.10					2.29	
Perry	do		.15						.08									.04						.18			.25						2.25	
Philadelphia	do		.14				T.		.12															.17			.28						2.62	
St. Charles	Missouri		.15						.09														.23			.05							1.75	
St. Joseph	do		.53			.02			.06														.04			.09	.12						2.66	
Saverton, Lock No. 22	Mississippi		1.38	.60		.01	.04		.30								.11						.27			.32							0.65	
Shelbina	do		1.10	.28					.25														.10			.40							3.03	
Shelbyville	do			.37					.19															.32			.34						2.13	
Steffensville	do		.38	.33		T.	.04		.17														.07	.15		.32		.34					1.72	
Turkio	Missouri		.36			.03																	.15			.32	T.						1.46	
Trenton	Grand		.42						.13														.31			.12							0.54	
Troy	Mississippi			1.61					.25									.18						.45		.10	.15						0.98	
Unionville	Chariton		.04	.43		T.			.18															.29			.10						2.74	
Warrenton	Mississippi		.70	1.50			T.		.22	T.							.22	.20						.24	.24		.35	T.					0.94	
Keokuk, Iowa	do		.35	.07		T.	.02		.18	T.													.20	.24	T.	.33							3.67	
Southwestern Division																																		
Altona	Osage			.52					.06															.25			.29						0.72	
Appleton City	do		1.01						.04								T.							.25			.25						1.61	
Bolivar	do		T.	.61					.14								.52	.02						.25	.14		.25						1.69	
Boonville	Missouri		.08	1.16																														



Daily Precipitation for December 1938—Continued from preceding page

Stations	Drainage-basins	Day of month																															Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
<i>Southeastern Division—Concluded</i>																																	
Bragg City	St. Francis	T.	1.07							.20							T.	.08					.37		.60			.10	.20		.18		2.72
Campbell	do	T.	.72						.17								T.	.08					.23		.47			.44			.03		2.14
Cape Girardeau	Mississippi		.02	.91	.14					.06								.21						.29		.21	.14			T.	T.		1.98
Caruthersville	do			.81													.38					.21					.91					2.31	
Centerville	Black	.05		1.33						.12								.32							.34			.32					2.38
Crystal City	Mississippi			1.61														.32							.61			.29					2.83
Cuba	Meramec			1.75														.54									.85						3.14
Dexter	St. Francis	T.	.70						.03									.02				T.		.27			.40	.02		T.	T.		1.44
Doniphan	Black			1.04					.08									.02	.10			.05	.05	.50			.39			.02			2.25
Farmington	St. Francis			1.10				T.	.01	.06							.15	.35					.09	.37			.31						2.44
Fisk	do	T.	1.07						.06									.09							.41						T.		1.63
Fredericktown	do			1.11					.06									.40										.12	.10				2.12
Goodland	Black			.90					.08								.22	.42					.05	.25			.16						2.08
Greenville	St. Francis			.99					.16									.36							.41		.37						2.29
Jackson	Mississippi			1.16					.06				.03					.25					.04	.25			.60						2.39
Jerome	Gasconade			1.56														.73							.52		.38						3.19
Koshkonong	Black		.45	1.55					.08								.10	.18					.18	.10			.40			.02			3.06
Leeper	do			1.10	.13				.19									.40							.44		.30	T.					2.56
Licking (near)	Gasconade	T.		.52					.03	.03							.17					.16	.30			.24							1.42
Marble Hill	Mississippi			.80					.05								.20	.25					.10	.15			.30						1.85
Meramec Park	Meramec			1.78														.44						.61		.19	.20						3.22
Morehouse	Mississippi		.08	.94					.15			.02					T.	.12					T.	.40		.45							2.16
New Madrid	do			.57					.21									.12	.01			.13		.46	.04		.15	.31		T.			2.00
Owensville	Gasconade			1.40														.40									.15	.20					2.15
Pacific	Meramec			1.36	T.					.12																.67							2.15
Parma	St. Francis			.81	.10																						.30	.10					2.19
Poplar Bluff	Black			.83					.20									.10															1.88
Richwoods	Meramec			1.47					.10									.41					T.				.31	T.					3.09
Rolla	do		.04	1.43		T.	T.		.07	T.							.50	.04						.34	.03		.39						2.84
St. Louis <sup>river</sup>	Mississippi		.51	.39		T.			.09								.28							.41	.09		.28	.01					2.06
St. Louis Airport*	Missouri		1.04	.28		T.	T.		.08	T.							.29							.62	T.		.25	T.					2.56
St. Louis University*	Mississippi		.54	.26		T.			.08								.23							.46	.10		.24						1.91
Salem	Meramec			.76					.05									.65								.44		.39					2.29
Sikeston	Mississippi			.88					.12									.08					.35				.20	.21					1.84
Union	Meramec		.40	1.01					.16								.21	.14					.15	.33			.29						2.69
Valley Park	do			.95	.05	T.			.08									.20									.09	.14					2.03
Van Buren	Black			1.03					.11								T.	.50							.45		.34						2.42
Wappapello Dam	St. Francis		.03	1.15					.10									.17							.39		.25	.09		T.			2.22
Washington Univ.	Mississippi			.85					.07									.29								.49		.12	.14				1.96
West Plains	Black		.34	1.15				T.	.13	T.							.11	.15						T.	.13	.12	.32			T.			2.45
Williamsville	do			.96	.01				.15									.34								.33		.20	.17				2.16
Willow Sprgs. (near)	White			1.13					.16									.39								.40		.35					2.43
Zalma (near)	Mississippi		T.	1.04													T.	.26								.42				T.			2.06
Cairo, Ill. <sup>river</sup>	do		.09	.38					.09	T.		T.	T.				.01	.04					T.		.21	.16		.37			T.		1.35

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. †† Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. T. Trace, or less than 0.01 inch.

\*\*\* Regular U. S. Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. \*\* Precipitation in the next following measurement; separate dates of fall not recorded. \* Precipitation is for 24-hour period, midnight to midnight. † Estimated. ‡ Partially estimated. |||| Incomplete.

NOTE:—In addition to the stations shown on daily temperature page, records of daily temperatures are kept at the following stations in Missouri: Advance, Appleton City, Bethany, Bolivar, Boonville, Campbell, Canton Lock No. 20, Clifton Hill, Columbia Airport, Conception, Dean, Edgerton, Elsberry, Fulton, Goodland, Greenville, Kansas City University, Kidder, Kirksville Airport, Koshkonong, Lakeside, Licking (near), Lockwood, Marble Hill, Memphis, Mount Vernon, St. Joseph Airport, St. Louis Airport, St. Louis University, Saverton Lock No. 22, Seligman, Seymour (near), Springfield Airport, Steffenville, Tarkio, Versailles, Wappapello Dam, Warsaw, and Washington University.

Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for December 1938  
(See precipitation data in daily precipitation table)

Station	Data	Day of month																														Monthly	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		31
Columbia.....	{ Evaporation .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	{ Mean temperature .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	{ Wind movement ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lakeside ..... (Osage Dam)	{ Evaporation .....	.061	.039	.082	.137	.147	.035	.051	.054	.049	.048	.031	.069	....	.109	.035	.058	.020	.052	.017	.063	.047	.044	†††	.032	.076	.020	.....	.....	.....	.....	.....	280
	{ Mean temperature .....	48	52	52	50	36	39	44	38	35	43	38	36	33	36	36	34	34	36	38	31	30	32	38	40	40	34	20	26	30	25	35	36.6
	{ Wind movement ..	21	51	83	82	124	54	48	26	124	35	29	68	27	63	35	64	58	32	26	66	75	60	55	55	58	64	131	67	78	50	35	1,844
St. Louis ..... (Washington University)	{ Evaporation .....	.012	.029	.006	.066	.065	.033	.030	.038	.012	.037	.024	.024	.074	.033	.056	.029	.021	....	†††	.086	.028	....	§§§§	.021	.029	.008	.....	.....	.....	.....	.....	.....
	{ Mean temperature .....	49	51	50	52	37	41	42	40	32	38	38	36	33	34	33	36	32	36	32	26	31	34	38	37	36	18	24	32	21	36	35.8	
	{ Wind movement ..	8	29	53	44	51	43	29	18	80	30	39	88	16	16	48	29	50	24	29	24	50	53	29	19	35	31	69	41	69	78	27	1,249

Observations taken at 8:00 a. m. except at 7:30 a. m. at Lakeside. For Columbia, Lakeside, and St. Louis (Washington University) descriptions see July 1938, April 1932, and August 1938 reports respectively. .... Evaporation included in next measurement. ††† - .017. ††† - .009. §§§§ - .025.



## Daily Temperatures for December 1938

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
Northern Division																																		
Brunswick, Mo.	Maximum	56	54	57	54	34	52	52	41	39	51	42	40	45	44	48	45	41	45	43	37	30	37	45	49	49	47	21	37	27	27	56	43.4	
	Minimum	32	35	37	38	31	26	28	33	23	22	29	25	19	20	22	22	20	17	21	22	19	12	17	29	27	25	9	9	19	8	22.7		
Chillicothe, Mo.	Maximum	49	49	58	52	34	51	52	39	41	54	41	39	46	44	49	43	42	44	42	37	28	35	43	54	50	39	30	36	22	36	56	43.1	
	Minimum	25	32	36	35	30	26	32	37	20	25	28	20	17	19	21	22	15	16	21	21	13	13	27	28	28	39	6	6	20	5	7	22.3	
Columbia, Mo.	Maximum	61	57	57	53	40	51	52	40	37	54	42	40	44	44	48	45	39	45	45	39	32	35	46	49	48	42	21	37	36	28	55	43.9	
	Minimum	41	49	39	40	27	27	33	32	25	31	34	27	23	27	25	32	22	24	24	31	20	25	35	31	30	17	10	17	15	10	21	27.2	
Fayette, Mo.	Maximum	58	56	52	51	48	51	52	46	37	53	51	40	44	43	46	45	42	45	45	43	34	32	45	49	47	45	22	36	36	28	55	44.4	
	Minimum	35	48	37	43	31	25	34	34	23	27	31	25	21	25	23	36	18	21	22	28	17	21	31	30	26	22	10	13	23	8	15	25.9	
Grant City, Mo.	Maximum	45	44	56	48	35	52	49	41	38	47	43	40	45	42	50	41	41	43	43	45	35	32	41	48	48	45	19	34	38	..	50	*42.6	
	Minimum	30	32	28	33	27	24	31	24	15	29	29	16	12	23	21	31	9	23	18	21	7	18	25	23	22	2	8	10	2	18	20.1		
Hannibal, Mo.	Maximum	46	54	49	51	43	48	48	42	36	41	38	37	36	35	42	43	38	40	36	35	34	32	41	41	43	36	23	29	32	19	52	39.4	
	Minimum	30	44	35	42	31	26	32	31	26	23	28	23	19	25	19	30	16	22	19	27	19	20	30	29	23	22	5	11	15	6	17	24.0	
Kansas City, Mo.	Maximum	57	53	61	52	40	54	54	44	44	56	42	42	46	45	53	44	37	46	54	36	36	41	47	55	55	45	23	39	33	28	58	45.8	
	Minimum	32	44	35	36	30	34	38	31	24	35	31	23	23	25	27	27	20	24	24	27	18	29	31	29	26	13	9	21	14	10	27	26.4	
Kirksville, Mo.	Maximum	46	49	51	50	43	49	48	41	35	49	41	38	43	38	43	43	42	39	36	39	35	31	41	42	42	40	20	31	28	23	48	40.1	
	Minimum	29	37	34	41	30	25	30	34	23	25	29	19	16	24	19	34	15	22	16	24	13	16	31	22	19	20	4	7	13	4	12	22.2	
Lawson, Mo.	Maximum	58	51	58	50	42	51	52	42	39	52	43	39	45	43	50	43	41	44	48	43	34	33	45	50	51	45	19	36	33	27	56	44.0	
	Minimum	32	45	32	38	28	27	36	35	19	30	29	21	18	22	32	36	14	23	22	24	15	22	28	26	28	17	6	13	16	5	17	24.1	
Louisiana, Mo.	Maximum	50	60	50	52	40	45	50	35	45	42	37	42	48	42	42	45	40	39	40	33	36	40	40	50	40	27	30	36	40	52	42.5		
	Minimum	26	43	40	37	32	27	33	28	28	20	30	27	20	31	11	29	20	12	17	31	21	16	30	27	21	20	9	10	21	10	11	23.8	
Macon, Mo.	Maximum	52	54	54	51	34	50	50	39	37	52	41	37	45	41	45	44	41	43	38	37	31	35	43	45	45	39	19	31	29	37	53	41.7	
	Minimum	28	31	34	34	30	26	29	34	24	25	27	21	17	23	19	22	14	20	17	19	14	18	25	28	22	33	5	8	18	5	6	21.8	
Maryville, Mo.	Maximum	43	44	55	48	36	50	49	40	37	47	42	39	44	41	50	42	40	41	40	37	31	32	40	50	50	43	18	35	28	25	52	40.9	
	Minimum	29	34	28	33	27	25	31	30	16	30	16	20	17	12	21	22	29	13	19	21	22	11	20	24	23	25	13	3	10	10	3	14	20.8
Mexico, Mo.	Maximum	60	54	55	58	33	52	53	43	40	53	42	40	45	45	47	45	40	42	46	38	30	38	47	48	46	45	22	33	37	39	56	44.3	
	Minimum	30	37	34	36	30	27	28	36	27	25	29	24	20	22	21	22	18	18	20	22	12	19	26	30	25	28	9	9	18	7	8	23.1	
Moberly, Mo.	Maximum	58	52	50	47	47	49	49	44	36	45	45	39	43	40	44	44	41	35	43	40	32	32	43	49	47	40	36	33	35	23	51	42.3	
	Minimum	30	48	35	43	30	26	35	35	24	26	35	23	21	24	21	35	17	25	20	26	16	20	31	24	36	21	7	10	20	6	14	25.3	
Oregon, Mo.	Maximum	49	45	59	50	38	53	53	45	45	46	43	40	46	43	50	45	41	42	46	37	36	35	44	53	55	49	21	38	33	27	55	43.9	
	Minimum	28	35	29	34	28	29	34	34	21	34	29	18	17	23	27	33	14	23	22	23	15	24	26	24	28	15	4	14	10	5	19	23.2	
St. Charles, Mo.	Maximum	61	59	56	60	38	50	54	41	35	53	45	42	46	45	43	43	41	48	44	39	29	38	40	49	45	41	25	38	44	30	57	44.5	
	Minimum	32	38	44	41	35	30	33	34	30	25	31	29	24	28	20	26	23	25	22	24	24	20	27	26	27	28	13	14	18	12	13	26.3	
St. Joseph, Mo.	Maximum	51	46	57	49	38	53	51	41	41	49	43	40	46	44	51	42	40	43	49	35	38	45	54	55	43	21	37	30	27	57	43.6		
	Minimum	31	40	32	34	29	33	37	29	23	34	29	23	20	26	28	26	18	25	24	26	18	27	28	28	29	12	6	20	11	8	24	25.1	
Trenton, Mo.	Maximum	58	56	58	56	38	52	53	48	41	49	47	41	46	46	41	43	44	44	41	40	36	34	42	46	48	40	34	30	25	20	54	43.6	
	Minimum	38	46	35	36	30	27	34	37	18	28	29	20	17	25	19	15	25	23	19	25	13	19	29	28	22	17	19	5	6	16	24.1		
Unionville, Mo.	Maximum	49	47	57	52	38	55	53	43	40	53	41	40	48	43	46	47	47	45	38	45	36	37	45	42	46	44	19	32	26	30	51	43.1	
	Minimum	28	30	33	33	29	25	27	31	20	19	28	30	17	18	18	14	14	14	14	19	11	15	25	24	21	20	2	2	17	2	3	19.6	
Warrenton, Mo.	Maximum	61	56	55	58	48	49	52	47	36	53	46	39	43	42	44	45	39	48	44	40	35	32	40	47	45	41	35	33	39	28	54	44.3	
	Minimum	36	48	40	43	32	28	35	33	27	24	30	25	23	27	21	31	20	20	31	20	31	31	27	32	9	12	26	9	12	26	9	17	26.7
Keokuk, Iowa	Maximum	44	56	49	51	38	48	46	40	36	42	41	34	43	35	42	46	37	37	37	40	30	35	40	39	41	40	15	31	32	18	47	39.0	
	Minimum	31	40	35	38	32	30	32	31	28	27	31	23	22	24	21	25	17	23	21														







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May. Hist. 2.16

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U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

# CLIMATOLOGICAL DATA

19

## MISSOURI SECTION

W. J. MOXOM  
ST. LOUIS, MO.

VOL. XLII

ANNUAL SUMMARY 1938

No. 13

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR

### GENERAL SUMMARY

Details of weather conditions in Missouri during 1938 will be found in the monthly reports of Climatological Data. The year, as a whole, was unusually mild. The average temperature for the State, 58.4°, is the highest average recorded since the beginning of record in 1888, but only slightly higher than 1921, when the average was 58.2°. The monthly averages were consistently above normal in every month, except June, which was slightly below normal. The highest temperature recorded during the year was 110° at Unionville on July 12. This extreme is not a record, however, as 110° has been exceeded several times. The highest ever recorded in Missouri is 118° in July 1936 at Clinton and Lamar.

The annual precipitation for 1938 in Missouri amounted to 41.00 inches, which is slightly above normal. The monthly amounts during the first six months were well above normal, except in April which dropped slightly below. A late summer and fall drought had its beginning in July and continued with little interruption until broken by the general rains early in November. This drought reached serious proportions, especially in central and southwestern counties, and was said to have been the worst fall drought of record in many localities. Fall plowing and seeding of winter grains delayed in many sections due to the hard, dry condition of the soil.

### TEMPERATURE

The annual mean temperature for the State was 58.4°, or 3.3° above normal. The highest annual mean was 62.1° at Campbell, and the lowest annual mean was 54.1° at Tarkio. The highest temperature recorded was 110° at Unionville on July 12th, and the lowest was 9° below zero at Tarkio on January 31st. The greatest daily range was 60° at Appleton City on October 25th.

### PRECIPITATION

The average annual precipitation for the State was 41.00 inches, or 0.68 inch above normal. The greatest annual amount was 56.29 inches at Willow Springs(near), and the least annual amount was 22.54 inches at King City. The greatest local monthly amount was 12.21 inches at Dean in May, and the least local monthly amount was Trace at Bethany in February and at Conception in October. The greatest precipitation in any twenty-four hours was 7.84 inches at Crystal City on June 11th. The average number of days with 0.01 inch or more of precipitation was 92, or three days more than normal.

The snowfall averaged 10.0 inches, or 7.7 inches less than normal. The greatest annual snowfall was 32.2 inches at Marshall, and the least annual amount was none at Annapolis, Birch

Tree(near), Greenville, and Ozark Beach. The greatest monthly snowfall was 21.0 inches at Warrensburg in February.

### CONDENSED STATE SUMMARY FOR 1938

Month	Temperature				Precipitation				
	Mean	Departure from Normal	Maximum	Minimum	Mean	Departure from Normal	Greatest	Least	No. Days with .01 or more
January	33.1	+ 2.3	75	- 9	2.93	+0.53	5.55	0.39	6
February	41.4	+ 8.3	80	- 5	3.20	+1.12	7.34	T.	7
March	53.6	+ 9.6	90	14	4.98	+1.72	10.72	1.20	12
April	56.7	+ 1.5	89	18	3.68	-0.23	7.82	1.25	10
May	65.0	+ 0.6	94	32	6.13	+1.35	12.21	2.21	13
June	72.4	- 1.2	98	44	4.77	+0.15	10.05	1.52	10
July	79.7	+ 1.7	110	53	3.50	-0.19	9.49	0.37	7
August	81.1	+ 4.6	108	53	2.62	-1.16	9.37	0.03	6
September	71.6	+ 2.3	103	30	1.85	-2.25	5.89	0.19	6
October	63.9	+ 6.4	99	19	1.23	-1.65	4.16	T.	3
November	45.9	+ 1.5	89	2	4.28	+1.60	9.26	1.90	6
December	35.9	+ 1.8	72	2	1.83	-0.33	3.70	0.27	6
Year	58.4	+ 3.3	110	- 9	41.00	+0.68	12.21	T	92

### COMPARATIVE ANNUAL DATA FOR MISSOURI

Year	Temperature			Precipitation					Number of days			
	Average for State	Highest	Lowest	Average for State	Average Northern Division	Average Southwestern Division	Average Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy
1888	52.9	111	-32	40.40	39.67	41.36	40.17	81	81	.....	.....	.....
1889	54.3	107	- 9	38.19	26.97	40.35	37.26	85	85	.....	.....	.....
1890	54.7	110	-19	39.51	31.07	42.08	45.39	82	82	.....	.....	.....
1891	53.9	104	-13	37.18	37.28	37.71	36.54	93	93	.....	.....	.....
1892	52.8	102	-31	44.77	41.62	47.88	44.80	92	141	95	130	.....
1893	52.7	107	-20	39.17	35.42	38.99	43.10	15.4	73	170	120	75
1894	55.1	111	-35	34.61	26.97	38.27	38.58	23.7	85	161	108	96
1895	52.9	106	-26	40.03	36.74	43.42	39.92	12.6	86	154	111	101
1896	55.5	108	-10	40.37	39.65	39.79	41.68	19.5	86	167	104	94
1897	55.0	108	-16	40.56	35.18	37.46	49.08	18.6	102	162	102	101
1898	54.4	104	-20	54.26	51.87	54.12	56.80	40.64	82	166	110	89
1899	54.0	108	-32	37.93	36.14	36.81	40.64	28.8	90	171	106	88
1900	55.6	105	-16	39.00	35.73	39.57	41.70	18.5	90	171	106	88
1901	55.5	116	-29	25.86	23.36	26.56	27.66	19.2	72	190	98	77
1902	54.1	103	-17	45.01	42.71	45.98	43.33	16.7	103	159	103	103
1903	53.6	102	-25	40.63	38.78	42.79	40.31	16.5	96	170	96	99
1904	53.2	100	-23	42.06	41.59	42.43	42.16	18.8	89	180	99	87
1905	53.6	103	-40	47.00	39.82	51.84	49.35	22.3	97	174	91	100
1906	55.0	101	-13	39.43	30.26	38.78	49.25	28.2	98	165	89	111
1907	55.4	109	-15	40.91	37.01	41.92	43.81	12.8	95	173	82	110
1908	56.8	102	-10	43.81	37.66	47.21	46.54	9.7	91	184	92	90
1909	55.8	110	-20	45.27	44.94	42.95	47.32	18.3	92	173	90	102
1910	54.6	109	-24	37.81	31.96	37.99	43.48	17.2	82	183	81	101
1911	56.7	113	-19	37.43	38.04	37.92	36.33	15.2	88	166	86	113
1912	53.5	105	-36	38.99	32.53	35.82	45.62	39.6	81	192	80	94
1913	56.5	110	-12	38.20	33.14	35.96	45.50	26.0	87	174	80	111
1914	56.1	109	-18	34.68	32.21	36.43	35.41	26.4	81	171	86	108
1915	55.0	102	-24	49.84	45.57	51.74	49.22	25.3	98	160	86	119
1916	55.3	109	-29	40.62	38.58	41.08	42.19	18.2	87	191	77	98
1917	52.6	107	-23	32.21	28.70	31.92	36.01	13.9	80	186	83	96
1918	55.4	111	-25	37.69	32.60	37.19	43.29	27.2	84	185	80	100
1919	55.3	106	-23	40.27	36.73	40.46	43.62	10.2	86	181	81	103
1920	54.3	105	-10	37.56	33.62	38.66	40.40	15.4	89	171	82	113
1921	58.2	109	- 8	44.70	39.16	46.40	48.54	11.1	92	173	93	99
1922	56.8	103	- 6	39.68	37.50	41.64	39.90	8.2	85	192	80	93
1923	55.3	108	-11	42.18	35.43	42.47	50.64	8.6	98	165	88	112
1924	53.0	106	-28	40.03	35.28	44.39	40.41	28.3	92	173	91	102
1925	55.6	110	-15	39.15	38.83	36.81	41.82	16.4	84	171	94	100
1926	54.5	108	-20	42.92	42.35	43.85	42.57	23.2	95	160	86	119
1927	55.6	102	-24	55.53	42.03	59.85	64.70	13.4	101	163	91	111
1928	55.2	102	-18	45.88	41.22	46.01	50.40	6.8	90	174	94	98
1929	53.5	105	-23	46.72	44.13	45.56	50.48	22.3	102	155	93	117
1930	55.9	114	-31	31.38	26.71	34.90	32.53	17.6	75	194	84	87
1931	58.0	110	- 5	40.31	41.10	38.85	40.97	14.2	93	175	82	108
1932	55.6	109	-21	38.24	35.88	36.74	42.09	16.0	85	178	93	95
1933	57.3	108	-22	37.62	29.65	37.05	46.16	8.0	86	175	95	95
1934	57.4	117	-26	35.08	30.66	34.92	39.66	23.0	82	187	89	89
1935	55.0	110	-12	48.04	42.33	49.12	52.66	5.0	106	144	89	132
1936	56.3	118	-25	29.42	26.48	30.03	31.73	15.8	73	196	86	84
1937	54.5	105	-15	37.30	29.85	36.16	45.89	15.3	93	160	96	109
1938	58.4	110	- 9	41.00	36.86	42.36	43.83	10.0	92	182	90	93
Period	55.1	118	-40	40.32	36.49	41.11	43.37	17.7	89	172	92	101



## Climatological Data for Year 1938

Stations	Counties	Elevation, feet	Temperature (Degrees Fahrenheit)						Precipitation (inches)						Number of days					Prevailing direction of wind	
			Length of record, years	Annual mean	Highest	Date	Lowest	Date	Length of record, years	Total	Greatest monthly	Month	Least monthly	Month	Total snowfall	With precip. .01 inch or more	Clear	Partly cloudy	Cloudy		
Northern Division																					
Bethany	Harrison	916	44	55.6	106	July 11	- 5	Jan. 31	46	27.49	6.59	Aug.	T.	Feb.	4.0	64	204	91	70	sw.	
Brunswick	Chariton	652	58	56.5	101	July 4†	- 1	Feb. 1	60	43.14	7.29	June	1.14	Feb.	21.4	95	208	49	108	se.	
Canton	Lewis	488	1	56.1	101	July 25	...	...	9	36.93	4.68	May	1.20	Oct.	12.8	93	...	...	...	s.	
Chillicothe	Livingston	779	30	56.2	104	July 11	- 3	Feb. 1	33	30.27	4.26	June	1.05	Dec.	11.9	87	218	74	73	sw.	
Clifton Hill	Randolph	731	40	56.3	99	July 4†	- 2	Jan. 31	30	43.57	6.99	May	0.56	Oct.	18.2	92	161	104	100	sw.	
Columbia	Boone	740	49	58.3	101	Aug. 10	- 1	Jan. 31	49	46.01	8.46	June	0.59	Oct.	19.3	101	137	118	110	s.	
Conception	Nodaway	980	50	56.1	104	July 4†	- 6	Jan. 31	55	25.04	5.88	May	T.	Oct.	4.7	67	152	148	65	nw.	
Edgerton	Platte	856	19	56.7	103	July 10†	- 2	Jan. 31	28	29.02	5.78	May	0.15	Oct.	8.0	94	238	30	97	s.	
Elsberry	Lincoln	449	8	57.1	100	July 12	- 3	Jan. 31	8	37.29	6.06	April	0.98	Oct.	11.4	82	157	133	73	nw.	
Fayette	Howard	760	59	58.0	100	July 2†	- 1	Jan. 31	56	40.38	7.07	May	0.66	Oct.	21.1	94	193	76	95	sw.	
Fulton	Callaway	818	51	58.0	102	Aug. 10†	- 3	Jan. 31	47	42.46	5.64	Mar.	1.63	Aug.	13.8	102	197	77	91	w.	
Grant City	Worth	1,134	35	55.1	106	July 12	- 8	Jan. 31	47	28.20	5.66	Aug.	0.17	Oct.	9.5	69	114	150	101	sw.	
Hannibal	Marion	759	47	56.5	98	July 11	- 1	Jan. 31	55	39.97	5.85	May	0.83	Oct.	13.6	98	126	73	166	sw.	
Kansas City Airport	Jackson	741	50	58.6	103	Aug. 10	- 2	Jan. 31	50	36.97	7.64	May	0.55	Dec.	14.2	96	137	106	122	sw.	
Kansas City University	Jackson	908	1	58.6	103	Aug. 10	- 2	Jan. 31	1	36.23	8.30	May	0.31	Dec.	19.6	92	157	113	95	sw.	
Kidder	Caldwell	1,020	47	56.1	103	July 10	- 3	Jan. 31	51	27.58	4.48	June	0.21	Oct.	7.0	93	200	66	99	nw.	
King City	Gentry	1,095	...	...	...	...	...	...	13	22.54	6.11	Aug.	0.34	Oct.	4.8	70	90	196	79	sw.	
Kirksville	Adair	969	50	55.4	99	July 11	- 4	Jan. 31	57	38.32	5.85	Aug.	0.92	Feb.	17.5	82	137	139	84	s.	
Lawson	Ray	1,070	1	56.8	100	Aug. 10	- 2	Jan. 31	1	36.57	7.51	May	0.54	Oct.	12.2	98	151	120	94	s.	
Linneus	Linn	816	...	...	...	...	...	...	7	33.36	5.98	Aug.	0.58	Sept.	10.4	87	208	69	88	sw.	
Louisiana	Pike	469	45	56.0	100	July 12†	- 1	Jan. 31	58	40.34	5.33	May	1.92	Feb.	13.8	97	196	101	68	w.	
Macon	Macon	875	40	55.5	101	Aug. 9	- 3	Jan. 31	46	38.46	5.47	June	1.05	Oct.	13.5	81	182	95	88	w.	
Maryville	Nodaway	1,169	49	55.0	103	July 11	- 7	Jan. 31	45	29.15	7.44	Aug.	0.23	Oct.	10.7	90	171	51	143	nw.	
Mexico	Audrain	800	50	56.8	102	July 11†	- 1	Jan. 31	61	47.19	6.49	May	1.05	Oct.	21.7	104	...	...	...	w.	
Moberly	Randolph	875	2	56.5	102	Sept. 10	- 0	Jan. 26	2	40.31	6.03	May	0.87	Sept.	13.5	84	201	77	87	sw.	
Oregon	Holt	1,048	83	56.9	103	July 4†	- 5	Jan. 31	83	28.76	7.67	May	0.34	Oct.	14.0	80	201	108	56	sw.	
St. Charles	St. Charles	520	51	59.2	106	Aug. 23	- 5	Jan. 31	61	38.37	6.86	Mar.	1.16	Aug.	5.0	97	218	76	70	nw.	
St. Joseph	Buchanan	957	29	57.2	103	July 10	- 1	Jan. 31	67	26.98	6.85	Aug.	0.14	Oct.	5.1	96	170	101	94	nw.	
Steffenville	Lewis	650	41	56.1	102	July 11	- 3	Jan. 31	46	46.95	8.83	Nov.	1.32	Oct.	19.0	94	155	141	69	n.	
Tarkio	Achison	916	36	54.1	101	July 5	- 9	Jan. 31	45	35.13	8.09	May	0.13	Oct.	14.5	79	157	114	94	sw.	
Trenton	Grundy	822	43	56.9	108	July 11	- 3	Jan. 31	44	28.02	7.21	Aug.	0.83	Oct.	10.4	85	175	122	67	sw.	
Unionville	Putnam	1,062	46	55.5	110	July 11	- 5	Jan. 31†	46	35.27	8.24	Aug.	0.61	Feb.	11.2	69	174	53	138	sw.	
Warrenton	Warren	816	57	58.5	101	Aug. 8	- 1	Jan. 31	49	45.25	6.74	Mar.	1.98	Aug.	13.0	114	180	125	108	sw.	
Keokuk, Iowa	Lee, Iowa	574	67	55.7	99	Aug. 10	- 2	Jan. 31	67	34.46	4.58	Mar.	1.04	Oct.	18.9	109	118	82	165	sw.	
Division means and extremes		.....	..	56.6	110	July 12	- 9	Jan. 31	..	36.86	9.37	Aug.	T.	Feb.†	12.7	89	172	98	95	sw.	
Southwestern Division																					
Appleton City	St. Clair	813	44	58.6	103	Aug. 8†	3	Jan. 31	47	40.61	10.04	May	0.58	Oct.	23.8	77	228	34	103	sw.	
Bollivar	Polk	1,071	36	60.4	100	July 13†	3	Jan. 31	44	37.02	6.14	May	0.53	Aug.	7.5	88	146	135	83	sw.	
Boonville	Cooper	650	1	58.6	100	July 4†	1	Jan. 31	62	38.76	5.24	May	0.73	Oct.	17.2	100	180	86	99	s.	
Clinton	Henry	765	46	58.8	103	Aug. 25	2	Jan. 31	52	46.32	8.79	May	1.08	Aug.	25.0	87	...	...	...	...	
Dean	McDonald	1,000	35	59.9	104	Aug. 9	2	Jan. 31	40	45.94	12.21	May	1.05	Sept.	2.8	77	175	118	72	w.	
Eldon	Miller	934	44	57.8	102	Aug. 8	2	Jan. 31	40	46.07	7.28	May	1.30	Aug.	17.0	92	152	132	74	sw.	
Garber	Taney	950	5	59.6	108	Aug. 23	5	Jan. 31†	5	44.77	8.29	May	0.73	Sept.	1.1	100	128	75	162	e.	
Harrisonville	Cass	904	61	56.2	104	Aug. 10†	- 1	Jan. 31	64	40.39	10.21	May	0.20	Oct.	30.3	81	155	85	125	sw.	
Jefferson City	Cole	557	49	56.4	101	Aug. 10†	- 1	Jan. 31†	57	48.31	7.28	May	1.89	Aug.	15.2	110	190	91	84	s.	
Lakeside	Miller	595	8	58.7	103	Aug. 22	4	Jan. 31	8	46.87	7.16	May	1.54	Aug.	...	102	...	...	...	sw.	
Lamar	Barton	980	51	59.5	107	Aug. 26	5	Jan. 31†	58	37.47	7.45	May	0.76	Oct.	12.0	71	205	72	88	sw.	
Lebanon	Laclede	1,265	51	58.6	103	Aug. 24†	1	Jan. 31	52	44.46	6.50	May	0.66	Aug.	10.8	93	166	100	99	sw.	
Lexington	Lafayette	688	54	57.8	102	July 11†	0	Jan. 31	55	44.75	7.66	May	0.96	Dec.	26.5	101	209	106	50	sw.	
Lockwood	Dade	1,078	33	60.1	103	Aug. 26	4	Jan. 31	43	41.01	7.29	May	1.32	Dec.	16.0	76	213	101	51	sw.	
Marshall	Saline	779	52	58.6	100	Aug. 10	0	Jan. 31	49	40.21	8.53	May	0.36	Oct.	32.2	81	245	62	58	sw.	
Mountain Grove	Wright	1,463	38	59.3	107	Aug. 23	2	Jan. 31	42	50.44	8.37	May	0.25	Aug.	3.0	92	212	89	64	s.	
Mount Vernon	Lawrence	1,174	27	60.4	105	Aug. 26	5	Jan. 31	45	46.89	8.58	June	0.75	Aug.	8.5	75	158	157	50	sw.	
Neosho	Newton	1,011	52	60.5	101	Aug. 26	6	Jan. 31	56	36.26	7.58	May	0.53	Sept.	5.2	90	242	55	68	sw.	
Nevada	Vernon	862	46	60.5	106	Aug. 9†	4	Jan. 31	47	34.87	6.93	May	0.55	Oct.	12.0	69	192	76	97	sw.	
Sedalia	Pettis	910	26	59.2	103	Aug. 9†	2	Jan. 31	28	47.57	8.29	May	1.46	Oct.	26.2	93	241	43	81	s.	
Seligman	Barry	1,542	38	59.7	98	Aug. 26	3	Jan. 31	36	47.88	8.92	May	0.68	Dec.	3.0	80	194	90	62	sw.	
Seymour (near)	Webster	1,642	33	58.0	101	Aug. 26	2	Jan. 31	33	46.91	8.16	May	0.36	Aug.	4.0	86	192	79	94	sw.	
Springfield	Greene	1,301	51	59.6	100	Aug. 24	3	Jan. 31	51	40.14	6.46	May	0.55	Aug.	8.5	104	170	94	101	s.	
Versailles	Morgan	1,037	12	59.1	101	Aug. 10†	- 1	Jan. 31	15	43.56	7.26	May	1.20	Oct.	14.5	98	187	69	107	sw.	
Warrensburg	Johnson	878	52	59.0	103	Aug. 10	- 1	Jan. 31	59	41.71	8.61	May	0.79	Dec.	32.0	78	196	77	92	sw.	
Warsaw	Benton	687	38	59.8	106	Aug. 7†	2	Jan. 31	44	44.31	7.52	May	0.19	Oct.	26.0	104	213	59	93	s.	
Division means and extremes		.....	..	59.0	108	Aug. 23	- 1	Jan. 31	..	42.36	12.21	May	0.16	Oct.	15.2	88	192	87	86	sw.	
Southeastern Division																					
Advance	Stoddard	355	2	59.8	100	Aug. 24†	11	Jan. 31†	2	43.34	10.39	Mar.	0.78	Sept.	0.1	101	...	...	...	...	



Monthly and Annual Mean Temperatures for the Year 1938, with Departures from Normal

	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
Stations	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure
Northern Division																										
Bethany	29.2	+ 4.4	36.1	+ 8.6	49.6	+ 9.3	53.1	+ 1.6	62.2	- 0.3	71.0	- 1.0	79.6	+ 3.3	79.6	+ 4.6	69.8	+ 2.7	63.0	+ 8.2	42.0	- 0.8	31.6	+ 1.5	55.6	+ 3.5
Brunswick	29.8	+ 3.1	37.4	+ 7.6	50.4	+ 8.5	54.2	+ 0.0	63.6	- 0.6	72.2	- 0.8	80.6	+ 4.5	80.0	+ 5.8	70.8	+ 3.8	63.6	+ 8.3	42.9	- 1.3	33.0	+ 1.5	56.5	+ 3.6
Canton, Lock & Dam No. 20	28.4	+ 3.7	36.7	+ 7.6	49.4	+ 8.5	53.2	+ 0.0	63.6	- 0.6	72.2	- 0.8	80.6	+ 4.5	80.0	+ 5.8	70.8	+ 3.8	63.6	+ 8.3	42.9	- 1.3	33.0	+ 1.5	56.5	+ 3.6
Chillicothe	28.6	+ 4.2	35.3	+ 3.0	49.8	+ 8.1	54.0	+ 2.0	64.2	+ 1.3	72.2	- 0.1	80.6	+ 3.8	80.0	+ 5.7	71.0	+ 3.5	63.6	+ 8.6	42.4	+ 1.1	32.7	+ 1.6	53.2	+ 2.8
Clifton Hill	30.0	+ 1.9	37.4	+ 7.2	51.2	+ 9.0	53.2	+ 0.3	63.4	- 0.2	70.6	- 1.8	79.1	+ 2.7	79.0	+ 3.0	69.5	+ 0.9	63.6	+ 7.1	45.0	+ 1.6	33.2	+ 2.2	56.3	+ 2.8
Columbia	32.4	+ 3.2	40.3	+ 8.6	52.8	+ 10.2	56.2	+ 1.3	64.6	+ 0.3	72.8	+ 0.8	81.0	+ 2.7	81.0	+ 3.0	71.0	+ 3.5	63.6	+ 8.6	42.4	+ 1.1	32.7	+ 1.6	53.2	+ 2.8
Conception	27.8	+ 3.1	33.8	+ 5.6	50.2	+ 10.4	53.8	+ 1.6	63.2	+ 1.1	72.5	+ 0.8	81.6	+ 3.0	80.0	+ 5.3	71.0	+ 3.5	63.6	+ 8.6	42.4	+ 1.1	32.7	+ 1.6	53.2	+ 2.8
Edgerton	31.6	+ 4.7	37.4	+ 3.1	51.4	+ 8.2	54.3	+ 0.5	63.7	+ 0.7	71.8	- 0.1	79.4	+ 3.3	80.0	+ 5.3	71.0	+ 3.5	63.6	+ 8.6	42.4	+ 1.1	32.7	+ 1.6	53.2	+ 2.8
Elberry	32.2	+ 4.7	37.4	+ 3.1	51.4	+ 8.2	54.3	+ 0.5	63.7	+ 0.7	71.8	- 0.1	79.4	+ 3.3	80.0	+ 5.3	71.0	+ 3.5	63.6	+ 8.6	42.4	+ 1.1	32.7	+ 1.6	53.2	+ 2.8
Fayette	32.0	+ 5.0	39.2	+ 8.6	53.8	+ 11.9	55.3	+ 1.1	64.4	+ 0.6	71.8	- 0.1	79.4	+ 3.3	80.0	+ 5.3	71.0	+ 3.5	63.6	+ 8.6	42.4	+ 1.1	32.7	+ 1.6	53.2	+ 2.8
Fulton	31.2	+ 1.7	39.9	+ 6.8	53.0	+ 8.9	57.0	+ 2.4	64.8	+ 0.2	72.9	- 0.3	80.6	+ 2.9	81.0	+ 3.0	71.0	+ 3.5	63.6	+ 8.6	42.4	+ 1.1	32.7	+ 1.6	53.2	+ 2.8
Grant City	28.0	+ 3.2	34.4	+ 5.8	49.1	+ 7.8	53.0	+ 0.8	62.4	+ 0.4	71.2	- 0.4	79.2	+ 3.0	79.2	+ 3.0	69.5	+ 0.9	63.6	+ 8.6	42.4	+ 1.1	32.7	+ 1.6	53.2	+ 2.8
Hannibal	30.1	+ 3.0	38.8	+ 9.1	51.6	+ 10.6	54.8	+ 1.4	63.5	+ 0.1	71.6	- 0.9	79.0	+ 2.2	79.2	+ 3.0	69.5	+ 0.9	63.6	+ 8.6	42.4	+ 1.1	32.7	+ 1.6	53.2	+ 2.8
Kansas City	32.0	+ 3.8	38.1	+ 6.9	52.2	+ 9.5	56.4	+ 1.6	65.2	+ 0.4	74.0	+ 0.4	82.4	+ 4.3	83.0	+ 6.4	72.3	+ 3.4	66.4	+ 8.7	45.2	+ 1.5	36.1	+ 3.6	58.6	+ 5.4
Kansas City University	33.7	+ 3.8	38.8	+ 6.9	52.2	+ 9.5	56.0	+ 0.6	64.8	+ 0.3	73.4	+ 0.4	82.4	+ 4.3	83.0	+ 6.4	72.3	+ 3.4	66.0	+ 8.7	45.6	+ 1.5	36.6	+ 3.6	58.6	+ 5.4
Kidder	29.8	+ 3.8	36.2	+ 7.8	50.2	+ 9.8	52.9	+ 0.7	62.7	+ 0.1	71.2	- 0.6	80.0	+ 3.4	79.1	+ 3.7	70.8	+ 3.5	64.4	+ 9.0	43.0	+ 1.2	32.4	+ 3.2	56.1	+ 3.8
Kirksville	29.1	+ 4.3	36.2	+ 9.1	50.2	+ 10.5	52.8	+ 0.9	63.0	+ 0.7	71.1	- 0.6	80.0	+ 3.4	79.1	+ 3.7	70.8	+ 3.5	64.8	+ 9.0	43.0	+ 1.2	32.4	+ 3.2	56.1	+ 3.8
Lawson	31.4	+ 3.7	37.1	+ 6.1	51.8	+ 8.5	54.0	+ 0.6	63.3	+ 0.1	71.2	- 0.6	80.0	+ 3.4	79.4	+ 3.7	70.8	+ 3.5	64.8	+ 9.0	43.0	+ 1.2	32.4	+ 3.2	56.1	+ 3.8
Louisiana	30.1	+ 2.0	39.8	+ 8.9	51.0	+ 7.5	54.0	+ 0.6	63.0	+ 0.1	71.0	- 0.6	80.0	+ 3.4	79.0	+ 5.1	71.0	+ 3.6	64.6	+ 9.5	40.0	+ 1.0	30.8	+ 4.0	55.0	+ 4.7
Macon	27.8	+ 0.8	36.0	+ 6.4	49.2	+ 7.0	52.6	+ 0.5	63.3	+ 0.2	71.2	- 0.6	80.0	+ 3.4	79.2	+ 4.1	81.0	+ 5.4	72.8	+ 3.6	64.8	+ 9.5	40.0	+ 1.0	30.8	+ 4.0
Maryville	27.8	+ 4.9	34.0	+ 8.2	48.8	+ 10.9	52.8	+ 2.0	62.4	+ 0.1	71.8	- 0.2	79.9	+ 4.2	78.8	+ 5.0	69.7	+ 4.1	63.0	+ 9.5	40.0	+ 1.0	30.8	+ 4.0	55.0	+ 4.7
Memphis	29.6	+ 1.6	37.8	+ 7.7	50.2	+ 8.2	54.8	+ 1.0	63.8	- 0.2	71.9	- 1.3	80.4	+ 3.1	80.5	+ 4.5	71.3	+ 2.8	63.0	+ 6.7	41.6	+ 1.7	33.7	+ 1.9	56.8	+ 3.1
Mexico	30.0	+ 3.7	36.6	+ 5.2	53.2	+ 8.5	54.7	+ 2.0	63.2	+ 0.7	72.8	- 0.6	80.8	+ 2.8	80.5	+ 4.5	71.6	+ 2.8	63.0	+ 6.7	41.6	+ 1.7	33.7	+ 1.9	56.8	+ 3.1
Moberly	30.0	+ 3.7	36.6	+ 5.2	53.2	+ 8.5	54.7	+ 2.0	63.2	+ 0.7	72.8	- 0.6	80.8	+ 2.8	80.5	+ 4.5	71.6	+ 2.8	63.0	+ 6.7	41.6	+ 1.7	33.7	+ 1.9	56.8	+ 3.1
Oregon	30.2	+ 6.1	35.8	+ 7.0	50.8	+ 11.2	54.7	+ 2.0	63.2	+ 0.7	72.8	- 0.6	80.8	+ 2.8	80.5	+ 4.5	71.6	+ 2.8	63.0	+ 6.7	41.6	+ 1.7	33.7	+ 1.9	56.8	+ 3.1
St. Charles	32.4	+ 1.4	41.7	+ 8.4	53.0	+ 8.5	58.6	+ 3.0	66.6	+ 3.5	74.2	+ 0.3	80.9	+ 2.8	82.4	+ 5.3	71.7	+ 3.6	64.7	+ 10.4	43.0	+ 1.5	34.4	+ 4.8	57.2	+ 4.2
St. Joseph	29.8	+ 4.3	36.2	+ 6.6	50.6	+ 10.1	54.7	+ 1.2	63.7	+ 0.5	73.2	- 0.8	80.9	+ 2.8	82.4	+ 5.3	71.7	+ 3.6	64.7	+ 10.4	43.0	+ 1.5	34.4	+ 4.8	57.2	+ 4.2
Steffenville	29.4	+ 2.0	38.2	+ 8.5	49.9	+ 7.5	53.3	+ 0.2	63.0	- 0.8	70.9	- 1.7	78.7	+ 0.9	79.1	+ 2.6	69.2	+ 2.3	63.0	+ 8.0	43.8	+ 1.8	29.8	+ 3.4	51.4	+ 2.6
Tarkio	27.0	+ 4.1	33.8	+ 4.8	46.6	+ 6.5	52.3	+ 0.1	62.0	+ 0.6	71.5	- 0.3	78.3	+ 1.5	76.4	+ 4.9	71.1	+ 4.2	63.9	+ 8.0	43.8	+ 1.8	29.8	+ 3.4	51.4	+ 2.6
Trenton	30.2	+ 3.9	37.0	+ 7.6	50.8	+ 9.7	53.6	+ 0.9	64.3	+ 0.8	72.0	- 0.2	81.6	+ 4.8	80.1	+ 4.9	71.1	+ 4.2	63.9	+ 8.0	43.8	+ 1.8	29.8	+ 3.4	51.4	+ 2.6
Unionville	27.4	+ 3.9	35.0	+ 8.3	47.8	+ 8.9	53.2	+ 2.2	63.2	+ 1.1	71.4	- 0.1	81.2	+ 4.7	79.9	+ 5.1	71.0	+ 3.6	63.0	+ 7.8	41.4	+ 1.1	31.4	+ 3.8	55.5	+ 4.3
Warrenton	33.0	+ 3.8	41.9	+ 11.0	54.0	+ 11.5	56.5	+ 1.7	64.0	+ 0.9	72.1	- 1.3	79.2	+ 4.1	80.0	+ 5.4	72.8	+ 3.6	64.8	+ 9.5	40.0	+ 1.0	30.8	+ 4.0	55.0	+ 4.7
Keokuk, Iowa	27.6	+ 2.7	37.0	+ 8.7	48.3	+ 9.4	54.1	+ 1.8	63.2	+ 0.6	71.2	- 0.3	79.4	+ 2.5	79.5	+ 4.5	70.4	+ 2.6	62.8	+ 7.4	43.8	+ 2.7	31.4	+ 1.8	55.5	+ 3.5
Division means	30.0	+ 3.3	37.4	+ 7.4	50.8	+ 9.3	54.3	+ 1.2	63.6	+ 0.2	71.9	- 0.5	79.9	+ 3.2	79.9	+ 4.5	70.8	+ 3.2	63.8	+ 7.9	43.9	+ 1.5	33.0	+ 2.6	56.6	+ 3.6
Southwestern Division																										
Appleton City	34.0	+ 2.7	40.6	+ 6.7	53.9	+ 8.8	56.8	+ 0.7	64.6	- 0.4	73.1	- 1.3	79.6	+ 1.4	83.0	+ 5.2	71.6	+ 1.2	64.5	+ 5.6	45.0	- 1.0	36.9	+ 2.3	58.6	+ 2.6
Bolivar	35.8	+ 1.9	43.6	+ 8.4	56.6	+ 9.7	58.5	+ 2.2	66.2	+ 1.4	72.9	- 0.1	80.2	+ 2.9	84.4	+ 7.5	73.6	+ 3.7	66.4	+ 7.8	47.6	+ 0.8	39.4	+ 3.8	60.4	+ 4.2
Boonville	33.5	+ 3.9	39.8	+ 5.4	55.8	+ 8.5	58.5	+ 2.2	66.2	+ 1.4	72.9	- 0.1	80.2	+ 2.9	84.4	+ 7.5	73.6	+ 3.7	66.4	+ 7.8	47.6	+ 0.8	39.4	+ 3.8	60.4	+ 4.2
Clinton	33.8	+ 2.1	40.6	+ 7.0	54.4	+ 9.4	56.4	+ 0.1	65.0	- 0.5	73.2	- 0.6	80.1	+ 1.8	82.6	+ 5.7	71.6	+ 3.0	65.0	+ 6.1	46.1	+ 0.9	37.2	+ 2.5	58.8	+ 2.5
Dean	36.8	+ 0.9	45.7	+ 10.6	56.4	+ 7.6	59.3	+ 2.6	66.4	+ 1.0	72.9	- 0.2	80.4	+ 1.1	81.0	+ 3.7	71.4	+ 3.6	64.7	+ 1.0	43.0	+ 1.5	34.4	+ 4.8	57.2	+ 4.2
Eldon	31.4	+ 0.3	40.2	+ 7.1	51.6	+ 8.0	55.8	+ 0.4	64.0	- 0.2	71.8	- 1.2	79.6	+ 2.4	82.2	+ 5.8	71.2	+ 1.8	64.2	+ 6.8	45.4	+ 2.3	35.2	+ 1.7	59.9	+ 2.7
Garber	35.6	+ 3.5	45.6	+ 10.6	56.4	+ 7.6	59.3	+ 2.6	66.4	+ 1.0	72.9	- 0.2	80.4	+ 1.1	81.0	+ 3.7	71.4	+ 3.6	6							



Monthly and Annual Precipitation for the Year 1938, with Departures from Normal

Stations	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure
Northern Division																										
Amity	2.05		0.69		2.79		6.59		3.94		7.53		2.11		3.82		0.89		0.14		2.60		0.85		34.00	
Bethany	1.48	+0.24	T	-1.42	2.25	+0.02	2.50	-0.79	4.39	+0.22	3.07	-1.99	2.42	-1.74	6.59	+2.77	0.92	-3.64	0.67	-2.25	2.38	+0.34	0.87	-0.28	27.49	-8.52
Bowling Green	4.21		1.96		3.93		3.86		3.65		3.90		2.19		2.55		2.48		1.55		3.02		3.17		36.47	
Brunswick	2.73	+1.14	1.14	-0.67	5.45	+2.75	4.86	+1.03	5.72	+1.11	7.29	+2.18	3.79	-0.32	3.58	-0.36	1.54	-3.27	1.53	-1.47	4.15	+1.96	1.36	-0.31	43.14	+8.77
Canton, Lock and Dam 20	3.68		1.47		3.86		3.93		4.68		3.89		2.72		4.03		1.45		1.20		4.61		1.41		36.93	
Centralia																	0.84		0.58		4.69		2.21			
Chillicothe	1.73	+0.25	1.45	+0.04	3.66	+1.18	2.47	-0.75	3.67	-0.42	4.26	-0.47	1.37	-2.05	3.63	-0.33	1.44	-3.34	1.85	-1.29	3.65	+1.53	1.05	-0.37	30.27	-6.02
Clifton Hill	2.56	+0.84	1.82	+0.08	6.26	+3.52	4.59	+1.23	6.99	+2.59	5.06	+0.67	4.70	+1.34	3.84	+0.04	1.37	-3.17	0.56	-1.96	4.04	+2.06	1.78	+0.06	43.57	+7.30
Columbia	3.34	+1.42	2.50	+0.46	5.59	+2.65	4.74	+0.97	7.14	+2.68	8.46	+3.70	2.60	-0.89	1.77	-1.83	1.49	-2.86	0.59	-2.02	4.57	+2.37	3.22	+1.36	46.01	+8.01
Conception	1.16	+0.37	0.45	-0.70	1.55	-0.10	3.60	+0.87	5.88	+1.82	2.03	-2.92	1.80	-2.87	5.46	+1.82	0.61	-4.03	T	-2.88	1.97	+0.23	0.53	-0.35	25.04	-8.74
Edgerton	1.46	+0.61	0.58	-0.76	2.25	-0.01	1.78	-1.30	5.78	+1.58	4.41	-0.46	3.85	+0.35	4.61	+0.57	0.87	-3.72	0.15	-2.47	2.71	+0.74	0.57	-0.55	29.02	-5.42
Edina	2.76		1.36		2.81		4.42		3.20		2.64		2.81		5.90		2.55		0.79		5.56		0.83		35.63	
Elberry	1.83		2.36		5.20		6.06		3.04		4.33		2.82		2.73		2.14		0.98		3.08		2.74		37.29	
Farber	3.70		2.44		6.15		4.58		6.20		4.82		3.46		8.06		0.91		1.72		3.72		2.83		43.59	
Fayette	2.98	+1.19	2.27	+0.57	3.82	+1.00	5.01	+1.46	7.07	+2.75	3.87	-0.70	4.65	+1.40	3.39	-0.17	1.05	-3.91	0.66	-2.23	4.04	+1.94	1.57	-0.09	40.38	+3.21
Fulton	3.39	+1.37	3.00	+1.33	5.64	+2.68	3.73	-0.28	5.51	+0.91	4.03	-0.37	3.73	+0.44	1.63	-2.02	2.98	-1.51	0.27	-1.35	3.70	+1.39	3.05	+1.04	42.46	+3.63
Gallatin	1.81	+0.59	1.05	-0.54	3.10	-0.78	3.48	-0.08	3.54	-1.18	4.98	-0.08	1.54	-2.58	4.11	+0.31	1.10	-4.10	0.31	-2.87	2.75	+0.67	0.60	-0.68	28.37	-9.76
Gorin	3.18	+1.80	1.19	-0.21	3.50	+1.28	5.38	+1.97	5.88	+1.31	4.16	-0.51	1.90	-1.71	6.71	+3.25	2.01	-2.66	1.96	-1.02	6.79	+4.76	1.00	-0.40	43.66	+7.86
Grant City	0.87	-0.10	0.30	-0.81	1.20	-0.81	4.19	+1.23	5.01	+0.78	2.26	-2.74	4.52	-0.11	5.66	+1.72	1.58	-3.11	0.17	-2.87	2.01	+0.16	0.43	-0.63	23.20	-7.29
Hannibal	4.09	+2.37	1.95	+0.09	2.97	+0.37	4.00	+0.81	5.85	+1.50	3.82	-0.08	3.23	+0.14	5.95	+1.61	1.09	-2.88	0.83	-1.56	4.69	+2.63	2.50	+0.90	39.97	+5.96
Hermann	2.50	+0.57	2.83	+1.18	7.60	+4.77	3.80	-0.23	6.54	+2.37	6.00	+1.63	4.86	+1.52	0.68	-2.99	2.77	-1.61	1.67	-1.96	5.75	+3.28	3.01	+1.20	48.01	+9.73
Kahoka	3.28		0.67		4.73		5.15		5.46		3.56		1.49		4.95		3.81		1.16		5.75		1.11		41.12	
Kansas City	1.89	+0.70	0.90	-0.85	3.06	+0.53	1.87	-1.27	7.64	+2.99	5.22	+0.23	3.82	-0.31	6.78	+2.69	1.84	-2.72	0.70	-2.22	2.70	+0.87	0.55	-0.78	36.97	-0.14
Kansas City University	1.71		1.20		3.13		2.07		8.30		5.23		4.20		4.36		2.74		0.59		2.39		0.31		36.23	
Kidder	1.78	+0.56	0.65	-0.89	3.41	+0.85	3.48	+0.20	3.61	-1.04	4.38	-0.59	2.03	-1.85	4.25	+0.29	0.71	-4.49	0.21	-2.86	2.55	+0.40	0.89	-0.38	27.58	-9.80
King City	1.37	+0.23	0.38	-1.12	1.41	-0.65	2.08	-1.22	4.04	-0.17	1.52	-3.79	1.08	-2.46	6.11	+2.43	0.87	-4.55	0.34	-2.56	2.62	+0.66	0.72	-0.36	22.54	-13.56
Kirkville	2.50	+0.98	0.92	-0.61	3.32	+0.38	3.36	-0.74	3.72	-1.61	5.20	+0.14	3.26	-1.04	5.55	+1.73	3.18	-2.00	1.75	-1.41	3.84	+1.72	1.42	-0.34	38.32	-2.80
La Belle	3.29		1.63		3.40		3.91		5.29		4.19		2.18		6.16		2.17		0.67		5.91		0.92		39.72	
Lawson	1.88		1.19		3.36		4.08		7.51		5.72		3.14		3.75		1.48		0.54		2.55		1.37		36.57	
Linneus	2.36		1.24		3.21		4.82		3.22		3.87		1.46		5.98		0.58		1.77		3.65		1.20		33.36	
Louisiana	4.20	+2.05	1.92	-0.16	3.64	+0.17	4.09	+0.37	5.33	+0.63	3.25	-0.98	2.15	-1.45	3.80	-0.74	2.30	-2.13	2.33	-0.95	3.68	+1.22	3.65	+1.75	40.34	-0.22
Lucerne	1.29	+0.27	0.89	-0.81	2.14	+0.09	2.80	-0.76	3.27	-1.46	2.41	-3.23	4.25	+1.19	9.37	+4.93	1.32	-4.34	1.23	-2.30	3.10	+0.82	1.32	-0.29	32.89	-5.89
Macon	2.91	+1.21	1.52	-0.18	3.74	+0.90	3.95	+0.29	4.58	-0.01	5.47	+0.75	3.23	-0.18	3.89	+0.08	1.42	-3.02	1.05	-1.84	5.24	+3.05	1.46	-0.18	28.46	+0.87
Madison	3.43		1.96		3.20		3.94		4.86		5.35		2.57		3.94		0.79		1.87		5.55		1.57		39.03	
Maryville	0.73	-0.27	0.49	-0.94	1.97	+0.10	3.88	+0.87	6.33	+1.68	2.03	-3.08	1.85	-3.38	7.44	+3.46	1.63	-3.05	0.23	-2.74	2.30	+0.38	0.27	-0.81	29.15	-7.78
Memphis	2.74		1.45		3.99		4.89		3.96		4.08		0.79		6.64		1.42		1.06		5.26		0.28		37.16	
Mexico	3.87	+1.84	2.16	+0.31	4.14	+1.23	4.52	+0.77	6.49	+1.89	5.87	+1.13	5.94	+2.73	4.01	+0.16	1.36	-3.61	1.05	-2.02	4.55	+2.32	3.23	+1.32	47.19	+8.07
Milan	1.94	+0.77	1.31	-0.07	3.25	+1.00	4.63	+0.66	3.13	-1.69	4.20	-0.90	2.17	-0.91	5.45	+1.30	2.72	-2.82	2.24	-1.73	3.89	+1.71	1.45	-0.36	36.47	-3.04
Moberly	2.88		1.65		4.39		3.63		6.03		5.14		1.03		4.54		0.87		1.28		4.13		1.74		40.31	
Monroe City	3.70	+1.79	1.57	+0.16	3.60	+0.71	3.32	-0.35	6.01	+1.61	4.40	-0.68	1.62	-2.04	4.47	+0.15	0.88	-3.94	0.57	-2.03	5.78	+3.41	3.70	+1.77	39.57	+0.56
New London	2.86		2.01		2.78		4.97		6.01		3.59		2.26		3.19	-0.61	0.55	-4.55	0.34	-2.41	2.25	+0.27	0.43	-0.61	28.76	-7.54
Oregon	1.19	+0.26	0.67	-0.70	2.16	+0.20	3.40	+0.11	7.67	+3.14	4.59	-0.78	2.32	-1.86	3.19	-0.61	0.55	-4.55	0.34	-2.41	2.25	+0.27	0.43	-0.61	28.76	-7.54
Palmyra	3.25	+1.25	1.76	+0.02	4.48	+1.80	2.94	-0.79	6.52	+2.21	3.16	-1.59	4.40	+1.15	6.21	+2.37	0.75	-4.02	1.80	-0.56	5.57	+3.38	2.29	+0.65	43.13	+5.82
Paris	3.09		2.04		3.69		4.35		6.87		4.86		1.82		3.26		0.69		1.32		4.84		2.25		37.68	
Perry	3.10	</																								



† Estimated

## KILLING FROSTS, 1938

WBO, St. Louis, 3-17-39-1215.







## CLIMATOLOGICAL DATA

UNIVERSITY OF KANSAS

## MISSOURI SECTION

W. J. MOXOM  
ST. LOUIS, MO.

Vol. XLIII

JANUARY 1939

No. 1

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## GENERAL SUMMARY

January 1939 is the seventh consecutive month with average temperature for the State above normal. During this month the temperature averaged  $39.0^{\circ}$ , which is  $8.0^{\circ}$  above normal, and has been exceeded only twice during January in the last 52 years of record. In January 1933 the temperature averaged  $41.4^{\circ}$ , which is the highest of record for the month, and in 1923,  $39.2^{\circ}$ , which is only slightly higher than that of the current month.

The maximum temperature during the current month of  $74^{\circ}$  has been exceeded several times. The highest ever recorded in January was  $83^{\circ}$  in 1909. There were only two stations in the State with temperature zero or lower during the month. Grant City had  $-2^{\circ}$  on the 16th and Tarkio  $-5^{\circ}$  on the same date. It is interesting to note that there have only been two Januaries during the period of record when the temperature failed to reach zero somewhere within the State. These were 1933 and 1923. The record low temperature for the State, during this month, is  $-36^{\circ}$  and occurred in 1912.

The moisture situation throughout the State is considered satisfactory. The northern division averaged somewhat below normal, the southwestern division slightly above normal, and the southeastern division considerably above normal. The monthly snowfall average depth of 8.1 inches is nearly twice the normal amount. During the period of record there have been only five Januaries with average snowfall greater than 8.1 inches. The greatest average monthly amount for the State ever recorded in January was 16.6 inches in 1918.

Winter grains made fair to good progress and at the close of the month were considered in a generally satisfactory condition.

Thunderstorms were recorded on the 4th and 5th, but no damaging windstorms were reported.

A moderate flood was in progress in the St. Francis River at the close of month. This was the only river to reach or exceed flood stage during the month, although the Black River was nearly bankful at close of month, and slightly exceeded flood stage at Poplar Bluff on February 1st, after which it decreased rapidly to nearly normal stage.

## TEMPERATURE

The monthly mean temperature for the State, 84 stations reporting, was  $39.0^{\circ}$ , or  $8.0^{\circ}$  above normal. The highest monthly mean was  $43.6^{\circ}$  at Campbell, and the lowest monthly mean was  $32.4^{\circ}$  at Grant City. The highest temperature recorded was  $74^{\circ}$  at Doniphan and Greenville on the 3d and at Sedalia on the 9th, and the lowest was  $5^{\circ}$  below zero at Tarkio on the 16th. The greatest daily range was  $53^{\circ}$  at Greenville on the 1st.

## PRECIPITATION

The average precipitation for the State, 145 stations reporting, was 2.74 inches, or 0.33 inch less than normal. The greatest local monthly amount was 5.95 inches at Caruthersville, and the least local monthly amount was 0.71 inch at Amity and Maryville. The greatest amount in any twenty-four hours was 3.15 inches at Centerville on the 29-30th. The average number of days with 0.01 inch or more was 9.

The snowfall averaged 8.1 inches, or 3.7 inches more than

normal. The greatest monthly amount was 16.5 inches at Bowling Green.

## MISCELLANEOUS PHENOMENA

Duststorm.—Conception on 6th.

Flood.—In St. Francis River on 31st.

Fog.—Dense, 4th, 11th, 15th, 17th, 18th, 19th, 28th, 29th.

(Continued on page 4)

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind				Relative humidity			Percentage of sunshine
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12 noon	6:30 p. m.	
Columbia.....	30.00	30.51	22	29.48	4	9.3	27	nw.	22	78	63	63	41
Kansas City.....	29.98	30.55	22	29.40	4	10.4	34	sw.	9	76	60	62	58
St. Joseph.....	29.98	30.53	22	29.40	4	9.4	30	nw.	21	76	61	63	50
St. Louis.....	30.01	30.43	25	29.30	30	13.0	33	sw.	9	76	66	65	39
Springfield.....	30.02	30.48	26	29.40	29	10.1	27	w.	5	78	62	63	55
Cairo, Ill.....	30.05	30.50	25	29.23	30	10.2	29	sw.	5	77	61	64	47
Keokuk, Iowa..	29.99	30.49	22	29.38	5	8.6	27	nw.	22	79	64	70	45

## COMPARATIVE DATA FOR JANUARY

Year	Temperature			Precipitation						Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy	
1888.....	21.5	74	-32	2.14	1.76	2.20	2.47	....	6	..	..	..	..
1889.....	31.8	69	-2	2.53	1.65	2.48	3.45	....	6	..	..	..	..
1890.....	33.8	81	-19	5.18	3.23	4.18	8.14	....	9	..	..	..	..
1891.....	34.1	74	-1	1.63	1.36	0.98	2.56	4.3	6	..	..	..	..
1892.....	24.0	67	-31	1.87	1.80	1.87	1.93	....	4	14	8	9	..
1893.....	22.5	66	-14	0.45	0.51	0.41	0.42	2.4	3	9	11	11	..
1894.....	31.4	77	-35	2.48	1.90	2.95	2.59	2.7	5	13	9	9	..
1895.....	24.7	78	-22	1.66	0.97	1.44	2.57	9.4	5	14	8	9	..
1896.....	32.9	71	-9	1.19	1.05	0.85	1.67	3.1	4	10	7	14	..
1897.....	28.4	72	-16	5.24	4.18	5.50	6.04	4.0	8	12	7	12	..
1898.....	34.3	75	-10	4.11	4.02	3.84	4.48	8.4	9	11	8	12	..
1899.....	30.2	70	-21	1.93	0.62	1.20	3.96	4.0	6	12	8	11	..
1900.....	34.5	77	-9	1.28	0.98	1.18	1.67	0.2	4	14	7	10	..
1901.....	35.0	72	-11	1.31	1.21	1.45	1.27	0.8	4	17	7	7	..
1902.....	30.1	72	-17	1.36	1.07	0.95	2.05	6.9	5	16	7	8	..
1903.....	31.4	73	-11	1.49	1.07	1.41	1.98	5.0	6	13	6	12	..
1904.....	27.0	66	-23	3.01	2.64	2.74	3.66	7.4	8	14	6	11	..
1905.....	22.3	72	-19	2.04	1.06	2.10	2.95	6.8	8	14	6	11	..
1906.....	35.6	77	-8	3.44	2.20	3.07	5.04	9.2	6	14	5	12	..
1907.....	34.3	79	-5	5.04	4.14	5.28	5.69	2.8	12	7	6	18	..
1908.....	34.4	68	-10	1.67	0.50	1.47	3.04	3.6	5	19	5	7	..
1909.....	33.7	83	-20	2.36	2.01	1.70	3.36	6.5	7	6	7	18	..
1910.....	32.3	78	-24	1.82	1.96	1.73	1.78	3.5	5	13	6	12	..
1911.....	34.6	78	-19	0.84	1.57	0.32	0.64	0.7	5	8	7	16	..
1912.....	20.0	70	-36	1.22	0.35	0.79	2.51	6.5	4	14	7	10	..
1913.....	33.1	74	-12	4.18	1.53	2.63	8.58	2.6	8	13	6	12	..
1914.....	38.1	78	-1	1.45	0.96	1.43	1.95	1.0	4	12	7	12	..
1915.....	29.1	76	-24	2.88	2.29	2.48	3.86	5.4	8	12	5	14	..
1916.....	31.6	72	-24	7.66	5.23	8.32	9.42	3.4	12	9	4	18	..
1917.....	32.9	76	-10	1.53	0.75	1.05	2.79	2.3	5	15	7	9	..
1918.....	16.4	67	-24	1.72	1.08	1.45	2.63	16.6	7	12	7	12	..
1919.....	34.0	70	-23	0.44	0.14	0.32	0.85	1.4	2	20	5	6	..
1920.....	28.6	72	-5	1.72	0.52	1.39	3.25	5.7	5	15	5	11	..
1921.....	37.1	74	-1	1.88	1.42	2.07	2.15	5.4	6	10	7	14	..
1922.....	29.5	66	-6	1.33	1.08	1.41	1.50	3.9	5	14	5	12	..
1923.....	39.2	75	3	2.58	0.77	2.21	4.77	0.6	6	12	7	12	..
1924.....	24.9	68	-25	1.59	1.08	1.64	2.05	5.7	7	14	5	12	..
1925.....	29.7	65	-15	1.05	0.41	1.29	1.44	4.7	4	15	7	9	..
1926.....	32.7	70	-20	1.93	1.28	1.91	2.60	4.2	6	11	7	18	..
1927.....	30.8	73	-24	3.05	0.90	2.43	5.81	3.6	6	13	6	12	..
1928.....	33.3	77	-18	0.97	0.31	0.81	1.80	0.5	3	16	7	8	..
1929.....	25.1	72	-13	3.51	2.77	2.79	4.96	6.8	8	11	6	14	..
1930.....	20.8	73	-31	4.62	2.38	4.18	7.30	13.0	10	12	5	14	..
1931.....	36.0	76	-5	0.74	0.39	0.65	1.18	2.0	4	16	6	9	..
1932.....	36.4	73	-7	3.56	1.78	3.23	5.66	1.0	9	10	7	14	..
1933.....	41.4	72	-8	2.56	1.73	2.62	3.34	0.5	6	14	8	9	..
1934.....	36.1	71	-6	1.34	0.88	1.33	1.82	1.5	5	13	6	12	..
1935.....	33.0	71	-12	2.57	1.47	2.44	3.81	0.5	7	12	6	13	..
1936.....	24.4	74	-25	1.01	1.69	0.66	0.77	7.6	7	11	7	13	..
1937.....	28.5	70	-15	6.38	3.66	5.20	10.28	4.3	11	9	5	17	..
1938.....	33.1	75	-9	2.93	2.53	3.00	3.27	0.3	6	13	6	12	..
1939.....	39.0	74	-5	2.74	1.40	2.25	4.57	8.1	9	12	8	11	..
Period.....	31.0	83	-36	2.41	1.62	2.18	3.43	4.4	6	13	6	12	..

NAT.  
HIST.



## Climatological Data for January 1939

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches					Number of days				Prevailing direction of wind	Observers	
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Length of record, years	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelted	With precip., .01 inch or more	Clear	Partly cloudy			Cloudy
Northern Division																					
Bethany	Harrison	916	44	34.4	+ 9.6	67	4	4	16	36	46	1.07	-0.12	0.30	6.5	7	14	10	7	n.w.	A. S. Cumming
Brunswick	Chariton	652	58	36.2	+ 9.5	69	4	13	16†	34	60	1.13	-0.46	0.35	8.0	9	17	3	11	sw.	O. K. Benecke
Canton, Lock & Dam 20	Lewis	488	1	35.0	.....	62	9	10	19	35	9	1.22	-0.72	0.37	6.0	10	13	6	12	w.	Lockmaster
Chillicothe	Livingston	779	30	34.9	+10.5	69	4	4	16	34	33	1.09	-0.39	0.36	8.9	8	18	7	6	se.	Wm. J. Olenhouse
Clifton Hill	Randolph	731	40	36.8	+ 8.7	63	4	12	22†	35	30	1.86	+0.14	0.45	12.5	11	9	9	13	sw.	Dr. A. J. Bradsher
Columbia	Boone	740	49	39.4	+ 8.5	67	9	16	22	29	49	1.66	-0.26	0.65	7.9	12	3	14	14	w.	U. S. Weather Bureau
Conception	Nowaday	980	50	34.3	+ 9.6	68	2	1	16	37	55	0.93	+0.14	0.23	5.5	8	10	12	9	n.w.	Fr. Adelhelm Hess
Edgerton	Platte	856	19	36.2	+ 9.3	68	2	3	16	39	28	1.39	+0.54	0.52	7.2	9	18	5	8	sw.	Fred L. Stiff
Elsherry	Lincoln	449	8	37.1	.....	65	3†	12	23	36	8	3.28	.....	1.72	7.5	11	9	12	10	n.w.	Ray E. Mills
Fayette	Howard	760	59	39.0	+12.0	68	4	14	22	34	56	1.14	-0.65	0.48	7.5	10	10	9	12	w.	Morrison Observatory
Fulton	Callaway	818	51	36.8	+ 7.3	68	3†	13	25	37	47	1.95	-0.07	0.85	10.5	10	15	5	11	sw.	Clyde C. Herring
Grant City	Worth	1,134	35	32.4	+ 7.6	.....	.....	2	16	34	47	0.81	-0.16	0.22	6.3	7	10	12	9	sw.	Howard Kybolt
Hannibal	Marion	759	47	35.4	+ 8.3	64	.....	10	19	34	55	1.95	+0.23	0.50	12.4	9	12	6	13	sw.	Hannibal Water Dept.
Kansas City Airport	Jackson	741	50	38.5	+10.3	67	2	12	16	34	50	1.28	+0.09	0.49	6.1	9	14	8	16	sw.	U. S. Weather Bureau
Kansas City University	Jackson	908	1	39.0	.....	68	2	11	16	34	1	1.25	.....	0.40	7.5	10	13	10	8	n.w.	University of Kansas City
Kidder	Caldwell	1,020	47	35.8	+ 9.8	68	4	2	16	33	51	0.90	-0.32	0.50	8.5	7	14	5	12	w.	Mrs. Geraldine Terry
King City	Gentry	1,095	.....	.....	.....	.....	.....	.....	.....	13	0.91	-0.23	-0.23	0.41	7.5	6	11	11	9	sw.	John M. Martin
Kirkville	Adair	969	50	34.4	+ 9.6	65	4	4	19	35	57	0.80	-0.72	0.20	4.5	7	11	10	10	n.w.	Charles Noble
Lawson	Ray	1,070	1	37.1	.....	68	2	4	16	31	1	1.15	.....	0.36	9.3	10	9	11	11	n.w.	Elmer E. Lamb
Linneus	Lincoln	816	.....	.....	.....	.....	.....	.....	.....	17	1.53	.....	.....	0.44	9.5	9	14	7	10	sw.	H. D. Taggart
Louisiana	Pike	469	45	35.0	+ 6.9	67	9	8	19	37	58	1.77	-0.38	0.80	13.0	7	15	8	8	w.	Stark Bro's Nurseries
Macon	Macon	875	40	34.6	+ 7.1	67	4	7	16	35	46	1.30	-0.40	0.27	9.8	10	14	8	9	sw.	Mrs. W. C. Brown
Maryville	Nowaday	1,169	49	33.6	+10.7	66	2	8	16	34	45	0.71	-0.29	0.30	7.6	8	11	6	14	n.w.	R. B. Montgomery
Memphis	Scotland	787	0	32.6 <sup>b</sup>	.....	65	4	8	17†	36	9	0.88	-0.65	0.21	5.5	7	11	9	11	n.w.	John W. Alexander
Mexico	Audrain	800	50	36.6	+ 8.6	68	9	13	22	39	61	1.82	-0.21	0.65	9.6	12	.....	.....	.....	w.	Mrs. Abbie Snoddy
Moberly	Randolph	875	2	36.7	.....	65	4†	10	19	33	2	1.61	.....	0.40	8.3	10	16	6	9	w.	McCormick Hospital
Oregon	Holt	1,048	83	36.3	+12.2	72	2	5	16	35	83	1.04	+0.11	0.40	10.5	5	12	11	8	sw.	Miss Mina Wright
St. Charles	St. Charles	520	51	38.5	+ 7.5	72	3	14	19	39	61	3.25	+1.10	1.30	11.0	12	7	12	7	sw.	Martin L. Comann
St. Joseph	Buchanan	957	29	36.8	+11.3	71	2	8	16	30	67	0.93	-0.35	0.35	5.0	9	10	9	12	n.w.	U. S. Weather Bureau
Steffenville	Lewis	650	41	36.0	+ 8.6	67	9	10	16	35	46	1.43	-0.58	0.27	13.5	11	12	11	8	s.	Frank Hall
Tarkio	Atchison	916	36	32.8	+ 9.9	67	2	5	16	38	45	0.92	+0.18	0.39	9.0	5	7	15	9	se.	Albert Volker
Trenton	Grundy	822	43	36.4	+10.1	67	4	5	16	36	44	0.99	-0.35	0.27	6.5	8	10	17	4	s.	W. H. Estes
Unionville	Putnam	1,062	46	33.8	+10.3	70	4	1	16	42	46	1.23	-0.49	0.39	3.5	6	14	6	11	se.	John H. Schick
Warrenton	Warren	816	57	39.5	+10.3	68	3†	15	19†	41	49	2.39	+0.20	0.60	13.0	11	7	14	10	sw.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.	574	67	35.2	+10.3	65	9	11	22	28	67	0.92	-0.64	0.27	3.8	12	5	9	17	sw.	U. S. Weather Bureau
Division means and extremes																					
..... .. 36.0 + 9.4 72 2† - 5 16 42 .. 1.40 -0.22 1.72 8.3 9 12 9 10 sw.																					
Southwestern Division																					
Appleton City	St. Clair	813	44	39.2	+ 7.9	70	8	12	25	37	47	2.39	+0.55	0.76	9.5	8	12	8	11	sw.	Rolla Brown
Bolivar	Polk	1,071	36	40.4 <sup>b</sup>	+ 6.5	68	8	18	16†	36	44	1.82	-0.11	0.49	6.2	9	14	4	13	sw.	Southwest Baptist College
Boonville	Cooper	650	1	36.7	.....	67	4	14	23	34	62	1.35	-0.37	0.52	8.0	7	10	5	16	se.	Boonville Water Dept.
Clinton	Henry	765	46	39.2	+ 7.5	69	8	10	25	37	52	1.99	-0.04	0.72	9.2	10	.....	.....	.....	.....	U. S. Weather Bureau
Dean	McDonald	1,000	35	42.2	+ 6.3	72	8	11	16	42	40	2.70	+0.17	0.85	3.0	5	16	6	9	w.	E. S. Taylor
Elton	Miller	984	44	39.0 <sup>b</sup>	+ 7.9	68	8†	16	23	44	40	2.33	+0.57	1.30	12.0	9	14	8	14	sw.	E. H. Shepherd
Garber	Taney	950	5	41.2	.....	73	2	12	16†	49	5	3.37	.....	0.93	5.5	7	10	7	14	n.w.	William H. Durham
Harrisonville	Cass	904	61	37.3	+10.0	67	2†	9	16	42	64	1.30	-0.27	0.43	7.0	7	10	6	15	sw.	John H. Patterson
Jefferson City	Cole	557	49	38.2	+ 8.4	69	9	13	16	40	57	2.17	+0.19	0.85	15.5	10	15	7	9	e.	Mrs. Frank Kliegel
Lakeside	Miller	595	8	39.4	.....	69	3†	18	27†	39	8	2.04	.....	0.98	.....	10	.....	.....	.....	sw.	W. S. Frame
Lamar	Barton	980	51	40.1	+ 8.0	71	8	15	16	38	58	1.87	+0.04	1.00	9.0	6	15	4	12	sw.	Jesse A. Mann
Lebanon	Laclede	1,265	51	41.1 <sup>a</sup>	+ 8.6	68	3†	16	23	35	52	1.89	-0.75	0.41	9.0	7	14	6	10	sw.	Mrs. Rosa E. Montelius
Lexington	Lafayette	688	54	37.6	+ 9.8	69	4	10	16	33	55	1.81	+0.29	0.40	11.3	11	12	10	9	sw.	Miss Carrie Loomis
Lockwood	Wade	1,078	33	41.3	+ 8.0	68	3	15	16	37	43	2.66	+0.80	0.71	14.0	7	14	9	8	sw.	Hubert A. Nieman
Marshall	Saline	779	52	39.5	+11.6	68	4	14	22	33	49	1.89	+0.24	0.60	12.5	10	19	4	8	sw.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	38	40.5	+ 7.7	68	3	15	18	36	42	4.71	+1.98	1.17	11.7	8	16	5	10	se.	Mo. Fruit Exp. Station
Mount Vernon	Lawrence	1,174	27	42.4	+ 9.1	70	8	13	16	38	39	3.07	+0.36	0.78	9.0	7	1	25	5	se.	G. H. Boswell
Neosho	Norton	1,011	52	42.6	+ 7.5	70	8	13	16	42	56	2.27	-0.20	0.67	7.2	7	15	4	12	sw.	U. S. Fisheries Station
Nevada	Vernon	862	46	41.8	+ 9.9	71	8	14	16	33	47	2.92	+1.09	1.02	11.0	9	11	5	15	sw.	T. J. Kaupp
Sedalia	Pettis	910	26	41.3	+14.9	74	9	16	22	32	28	1.84	-0.41	0.53	8.9	11	12	10	9	n.w.	Dr. J. E. Cannaday
Seligman	Barry	1,542	38	42.4	+ 7.3	69	8	15	16	34	36	3.18	+0.39	0.78	8.5	7	15	8	8	sw.	Floyd E. Fawver
Seymour (near)	Webster	1,642	39	39.2	+ 5.2	67	3	10	25	41	33	2.80	+0.21	1.05	12.5	7	14	6	11	s.	A. L. Hailey
Springfield	Greene	1,301	51	40.8	+ 7.3	67	2	19	16	33	51	2.70	+0.36	1.15	10.0	7	11	9	11	w.	U. S. Weather Bureau
Versailles	Morgan	1,037	12	41.1	+ 7.9	69	8	16	22†	37	15	2.13	+0.13	0.57	8.8	9	13	8	10	sw.	I. M. Wilson
Warsburg	Johnson	878	52	39.6	+10.9	69	4	12	16	31	59	1.56	-0.22	0.47	10.2	8	9	13	sw.	E. A. Markey	
Warsaw	Benton	687	38	41.0	+ 8.1	70	4†	14	16	39	44	1.70	-0.44	0.49	8.0	12	14	5	12	sw.	Everett Martin
Division means and extremes																					
..... .. 40.2 + 8.5 74 9 9 16 49 .. 2.25 +0.07 1.30 9.5 8 12 8 11 sw.																					
Southeastern Division																					
Advance	Stoddard	355	2	41.2	.....	71	3	20	19†	37	2	5.21	.....	2.49	5.6	9					



Daily Precipitation for January 1939

Stations	Drainage-basins	Day of month																															Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Northern Division																																		
Amity <sup>2</sup>	Grand				T.	T.				.03		T.		T.	.03	.27	T.	.10	.02					.10	.16					T.	T.		0.71	
Bethany	do				.08					.14				.11		.08		.26						.30	T.					T.		.10	1.07	
Bowling Green <sup>2</sup>	Mississippi				T.	.08				.17	.04			T.	.04	.10	T.		.14						.30					*	.60	T.	1.47	
Brunswick <sup>2</sup>	Grand				.08	T.				.13					.06	.15	.02		.07						.35					.02	.25		1.13	
Canton, Lock No. 20 <sup>2</sup>	Mississippi				.05	.01	.01			.13					.15	.30	.04	T.	.03						.13					T.	.37		1.22	
Centralia <sup>2</sup>	do									.18							.14								.50						.51		1.46	
Chillicothe <sup>2</sup>	Grand				.01	T.				.12					.09	.36		.15						.21						.02	.13		1.09	
Clifton Hill	Chariton				.10	.01				.05					.02	.05	.10	.20							.45					.38	.40	T.	1.86	
Columbia <sup>1</sup>	Missouri				.19	.02				.15					.03	.02	.05		.06					.42	T.					.02	.58	.10	.02	1.66
Conception	do									.04					.08	.05	.23	.23						.21						T.	.02	.07	0.93	
Edgerton	Missouri									.08					.02	.11	.14	.11	.31					.52						T.	.05	.05	1.39	
Edina <sup>2</sup>	Mississippi				.19					.08					.14	.18		T.	.20						.15					T.	.10		1.04	
Elsberry	do				.23	.08				.14				.05	T.	.23		.18	.09					.26						.06	.24	1.72	3.28	
Farber <sup>2</sup>	do									.10					.04	.18	.02		.15						.25						10	1.59	2.43	
Fayette	Missouri				.05	.01				.04					T.	.08	T.	.05						.43	.05					T.	.28	.13	.02	1.14
Fulton <sup>2</sup>	do				.08	.04	T.			.23					.02	.06	.10	T.	.15						.36						.06	.85	T.	1.95
Gallatin <sup>2</sup>	Grand									.07					.14	.25		.07	.05					T.	.30						.05			0.93
Gorin	Mississippi				.57	T.				.12					T.	.10	.12	.30						.13						T.	T.	T.	1.34	
Grant City	Grand				.04	T.				.04					.17	T.	.16	T.	.13					.22						T.	.50	.35	.04	0.81
Hamblin	Mississippi				.05					.16					T.	.03	.38		.14	T.				.30	.05						.10	1.46	T.	2.46
Hermann <sup>2</sup>	Missouri				.08	.14				.10	T.				.02	.02	.03	T.		.31					.20						.06	.08	0.80	
Kahoka <sup>2</sup>	Mississippi					.15	T.			.06	T.				.16	.05			.06						.18									2.86
Kansas City Airport <sup>3</sup>	Missouri				T.					.08					.08	.09	.10	.17					.49							.03	.22	.02	1.28	
Kansas City University	do									.09	T.		T.		.04	.02	.15	.14					.40	.06						T.	.26	.08	.01	1.25
Kidder <sup>2</sup>	Grand									.08					.03	.50		.04					.10	.11							.04		0.90	
King City	Missouri									.04					.06	.27		.03					.41								T.		.10	0.91
Kirkville	Mississippi				.10	.05				.19					.03	.18		.05					.20								T.		0.80	
LaBelle <sup>2</sup>	do				.23					.09					.11	.25		.04	.07						.20						.02	.20		1.21
Lawson	Missouri									.10					.04	.05	.23	.11						.36						.04	.10	.06	.06	1.15
Linneus <sup>2</sup>	Grand				.33	.01				.15					.10	.44	T.	T.	.13					.27							.04	.06		1.53
Louisiana	Mississippi				.10					.20						.22		.10						.20							.15	.80		1.77
Lucerne <sup>2</sup>	Grand				.29	.07				.23					.08	.06		.05	T.						.16						T.	T.		0.94
Madison <sup>2</sup>	Chariton				.17	.04				.08					.13	.26	.04	.04	T.					.27							.02	.25		1.30
Maryville	Mississippi				.02	.03				.09							.01	.20	.01					.22	.28						.29	.30		1.45
Memphis <sup>2</sup>	Missouri									.03					.05	.02	.28		.09					.20							.01		.03	0.71
Mexico <sup>2</sup>	Mississippi				.15					.17					.11	.14	.02	T.						.21							.08	T.	0.88	
Milan <sup>2</sup>	do				.03	.02				.23					.02	.03	.25	.03	.03	.08				.40							.05	.65		1.82
Moberly	Grand				.22	.08				.18					.14	.17		.02	.04					.17							.03	.02		1.07
Monroe City	Mississippi				.05	.10				.10					.07	.05		.10						.40							.14	.36		1.61
Oregon	do				.07					.22					.07	.14		.09						.40							.24	.14		1.71
Palmyra <sup>2</sup>	Missouri				T.										.03	.18	.28		.15					.40							T.		1.04	
Paris <sup>2</sup>	Mississippi				.08	T.	T.			.13	T.				.10	.27		.03						.40								.45		1.46
Perry <sup>2</sup>	do				.16	T.	T.			.11					.01	.29	.01	.02	.01					.28							.02	.61		1.52
Philadelphia <sup>2</sup>	do				.03					.10	T.				*	.03	*	.30		.05					.35						.20	.35		1.41
St. Charles <sup>2</sup>	Missouri						.05			.24					.30				.04					.25							.21		1.09	
St. Joseph <sup>1</sup>	do				.06	.60				.05	.04				.06	.02	.04	.05		.30				.25							.48	.30		3.25
Saverton, Lock No. 22 <sup>2</sup>	Mississippi				.05	T.	.01			.16	.01				.08	.28	.07	.09					.30	T.		.17	T.				.01	.01	.06	0.93
Shelbina	do					.04				.07					.03	.12	.20	T.	*					.48							*	.76		1.60
Shelbyville <sup>2</sup>	do				.10					.09					.12	.20								.23							.32		1.13	
Steffenville	do				.15	.05				.11					.09	.08	.27	.07	T.					.21	T.						.09	.10	.21	1.43
Tarkio	Missouri									.09					.03	.39		.20						.20									.10	0.92
Trenton	Grand				.03					.17					.14	.01	.25	.05	.05					.27	.07						T.		T.	0.99
Troy <sup>2</sup>	Mississippi				.01	.20				.10	.01				.02	.05	.03		.20					.18							.01	.135		2.16
Unionville <sup>2</sup>	Chariton				.18	.21				.15					T.	.20		.10						.39										1.23
Warrenton	Mississippi				.36	.12				.15					.05	.10		.20	.08					.30	T.						.03	.40	.60	2.39
Keokuk, Iowa <sup>1</sup>	do				.27	.02				.10					.06	.06	.01		.04	T.				.21	T.									



## Daily Precipitation for January 1939—Continued from preceding page

Stations	Drainage-basins	Day of month																															Total				
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31					
<i>Southeastern Division—</i>		<i>Concluded</i>																																			
Bragg City <sup>2</sup>	St. Francis				T.	1.50					.30			1.05	T.				.18						.56						.60	1.10	5.29				
Campbell	do			1.31	.22					.32			.13	.49				.25	.01					.37						T.	2.20	.11	5.41				
Cape Girardeau <sup>2</sup>	Mississippi			.19	1.60						.18			.24	.03				.14						.11						.67	2.08	5.24				
Caruthersville <sup>2</sup>	do				1.50						.56			.64					.40						.16						.54	2.15	5.95				
Centerville <sup>2</sup>	Black			.12	.70					.25	.15			.15					.35						.13						•	3.15	5.00				
Crystal City <sup>2</sup>	Mississippi				.51					.21	.02			.10	.25				.25						.22						•	1.96	3.52				
Cuba <sup>2</sup>	Meramec			.38	.31														.40						.30							2.05	3.44				
Dexter <sup>2</sup>	St. Francis			.02	1.90					.23				.05					.65						.20							.65	2.05	5.75			
Doniphan	Black			1.48						.27			.08	.22				.17							.41						T.	2.18	.50	5.31			
Farmington	St. Francis			.18	.34					.33				.12		T.	T.	.35	T.						.23						T.	1.26	.90	3.71			
Fisk <sup>2</sup>	do			.52	1.16								.07																					4.97			
Fredericktown <sup>2</sup>	do				.69						.55			.08					.21						.18							.50	1.16	3.37			
Goodland	Black			.29						.63				.13		.05		T.	.23	.01					.20							1.08	1.20	3.82			
Greenville	St. Francis			.97	.15					.20				.28				.39							.43							1.55	.96	4.91			
Jackson	Mississippi			1.93						.15				.30					.25						.24						T.	1.55	1.25	5.73			
Jerome <sup>2</sup>	Gasconade				.45						.30								.22						.25							.137		2.59			
Koshkonong	Black			.30	.06					.93			.06	.13				T.	.40						.46						.04	2.32	.76	5.46			
Leeper <sup>2</sup>	do			.11	1.13						.30			.19	T.			T.		.36					.35							.60	2.30	5.34			
Licking (near)	Gasconade			.67	T.					.04				.08		.05			.32	.04					.47								.50	.80	T.	2.97	
Marble Hill	Mississippi			1.20	.10					.15				.25	.30				.34						.20							2.95	.25	5.75			
Meramec Park <sup>2</sup>	Meramec			.37	.31					.32				.14					.35						.24								.23	2.10	4.05		
Morehouse	Mississippi			1.27	.21					.19				T.	.48				.17	.03					.27							T.	2.36	.45	5.43		
New Madrid <sup>2</sup>	do				1.31	1.10					.21			.79	.03				.26						.37								.70	2.11	.01	5.71	
Owensville <sup>2</sup>	Gasconade			.52		.50						T.		.02				T.		.42						.25							.36	1.21	2.51		
Pacific <sup>2</sup>	Meramec			.36	.50						.25	T.		.02				T.		.66						.25							.23	2.50	4.54		
Parma <sup>2</sup>	St. Francis			.10	1.32						.24			.76					.32						.37								.64	2.17	5.65		
Poplar Bluff <sup>2</sup>	Black			.61	.50					.23				.43					.32						.38								.68	2.11	5.26		
Richwoods <sup>2</sup>	Meramec				.60					.01				.19					.34						.23								.30	1.65	3.32		
Rolla	do			.96	T.					.30				.04	T.	.01	T.		.23	.03					.26	T.						T.	.61	.71	T.	3.15	
St. Louis <sup>1</sup>	Mississippi			.49	.19					.30				.18	T.	.05			.47						.32	T.						.46	1.28	.34	4.08		
St. Louis Airport <sup>2</sup>	Missouri			.40	.36					.17				.10	.03	.08	T.	.34	.01						.17								.44	1.41	.42	T.	3.93
St. Louis University <sup>2</sup>	Mississippi			.67	.26					.26				.13	T.	.06			.41						.36								.52	1.46	.29	4.42	
Salem <sup>2</sup>	Meramec			.25	.70					.30	.12			.04				.06	.47						.36								.12	.92	3.34		
Sikeston <sup>2</sup>	Mississippi				1.47					.42				.37					.17														•	2.90	5.50		
Union	Meramec			.30						.15				.08					.35	.18					.21								.86	.74	2.87		
Valley Park <sup>2</sup>	do			T.	1.00	T.				.42				.15				T.		.55					.30								T.	.53	1.73	4.33	
Van Buren	Black			.76						.18				.32		.05			.22							.38							.82	2.24	5.88		
Wappapello Dam <sup>2</sup>	St. Francis			.55	.62					.08				.09		.04	.01		.49						.28							.01	.52	1.50	4.02		
Washington Univ. <sup>2</sup>	Mississippi				.92					.08				.17				T.	.56	T.					.36	.01						.05	1.38	.82	T.	4.94	
West Plains	Black			.84	.17					.56				.02		.17		T.	.37						.32									1.01	2.25	5.72	
Williamsville <sup>2</sup>	do			.03	1.16					.27				.07		.01		.03		.60						.42								.64	1.78	5.07	
Willow Sprgs. (near) <sup>2</sup>	White			.41	.64					.51				.07					.60							.15								.75	1.94	4.86	
Zalma (near) <sup>2</sup>	Mississippi			•	1.35					.15				.24					.28																	4.86	
Cairo, Ill. <sup>1</sup>	do			.81						.15				.23	.04	T.	T.		.15						.03	.18	T.					.37	1.99	.20	4.15		

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation.

<sup>1</sup> First-order Weather Bureau station; precipitation is for the 24-hour period, midnight to midnight, unless otherwise indicated. <sup>2</sup> Precipitation is measured in the morning; amount then recorded is for the preceding 24 hours. <sup>3</sup> Precipitation is for 24-hour period, midnight to midnight. <sup>4</sup> Precipitation measured with recording gage. \* Included in next measurement. T. Trace, or precipitation less than 0.01 inch. † Estimated. ‡ Partially estimated. || Incomplete.

NOTE:—In addition to the stations shown on daily temperature page, records of daily temperatures are kept at the following stations in Missouri: Advance, Appleton City, Bethany, Bolivar, Boonville, Campbell, Canton Lock No. 20, Clifton Hill, Columbia Airport, Conception, Dean, Edgerton, Elsberry, Fulton, Goodland, Greenville, Kansas City University, Kidder, Kirksville Airport, Koshkonong, Lakeside, Licking (near), Lockwood, Marble Hill, Memphis, Mount Vernon, St. Joseph Airport, St. Louis Airport, St. Louis University, Saverton Lock No. 22, Seligman, Seymour (near), Springfield Airport, Steffenville, Tarkio, Versailles, Wappapello Dam, Warsaw, and Washington University.

## Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for January 1939

(See precipitation data in daily precipitation table)

Station	Data	Day of month																															Monthly	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Columbia.....	{ Evaporation .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	{ Mean temperature .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	{ Wind movement .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Lakeside ..... (Osage Dam)	{ Evaporation .....	.059	†††	.062	.087	.109	.133	.110	.052	.045	.241	.063	.032	.012	.060	.058	*	.040	.006	.027	.028	.093	*	*	*	.357	*	.196	.019	.008	.017	1.903		
	{ Mean temperature .....	43	52	54	56	46	44	44	50	55	46	38	35	38	41	34	32	30	34	37	43	48	25	27	31	38	31	34	31	40	32	30	39.4	
	{ Wind movement .....	56	64	62	88	112	96	57	16	58	145	18	21	32	79	88	83	52	67	56	49	52	172	48	116	81	102	52	117	68	96	55	2,258	
St. Louis .... (Washington University)	{ Evaporation .....	*	.213	.011	.028	.....	.042	.097	.054	.031	.021	.058	.025	.000	.005	.005	†††	.008	.013	.....	.....	.082	*	*	*	*	.245	.000	.106	\$\$\$	.....	.....	.....	
	{ Mean temperature .....	43	50	57	56	45	45	46	52	50	46	40	36	36	36	36	38	30	31	30	28	38	50	24	26	31	34	32	34	32	38	30	32	38.6
	{ Wind movement .....	25	48	47	48	66	35	51	10	33	80	18	21	42	45	38	15	38	31	39	22	13	29	93	37	41	39	61	45	80	43	201	50	1,449



## Daily Temperatures for January 1939

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
Northern Division																																	
Brunswick \$\$. Maximum...	55	62	64	69	50	63	54	65	67	50	46	45	43	42	34	30	33	34	46	55	61	26	25	42	47	43	48	42	39	35	40	46.9	
Brunswick \$\$. Minimum...	27	33	36	43	36	29	30	31	35	36	30	27	27	30	29	13	13	17	16	21	33	15	14	18	15	16	19	19	36	26	23	25.6	
Chillicothe \$\$. Maximum...	61	59	62	69	51	61	53	62	61	49	46	51	41	42	27	28	32	30	43	50	50	29	30	37	45	38	45	41	38	40	41	45.5	
Chillicothe \$\$. Minimum...	30	33	35	42	35	31	31	31	33	30	30	28	31	26	26	4	5	12	9	16	34	11	12	20	16	18	19	24	36	22	22	24.3	
Columbia. Maximum...	59	63	66	66	50	61	55	65	67	50	46	43	41	44	37	33	35	37	50	58	57	32	30	37	50	40	47	42	39	33	36	47.4	
Columbia. Minimum...	36	42	49	43	35	35	40	41	48	38	33	32	34	32	24	20	25	21	24	34	32	16	20	25	21	29	21	39	32	25	23	31.3	
Fayette. Maximum...	56	62	63	68	64	62	57	64	66	62	47	44	41	44	43	32	34	35	52	55	54	45	26	37	48	44	45	42	40	44	34	48.7	
Fayette. Minimum...	34	37	48	45	34	28	36	34	51	34	30	27	33	30	26	20	26	19	19	29	39	14	16	23	15	30	16	35	33	23	21	29.2	
Grant City. Maximum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Grant City. Minimum...	24	34	34	37	32	28	25	30	45	24	23	23	30	21	18	2	19	3	6	18	33	7	11	22	12	24	15	36	30	20	26	22.8	
Hannibal. Maximum...	54	59	60	63	59	55	52	64	63	57	43	42	38	35	34	27	33	31	34	49	51	45	23	35	37	37	43	40	39	35	31	44.1	
Hannibal. Minimum...	30	37	44	38	33	27	35	33	46	35	30	29	31	29	24	18	21	16	10	28	28	11	13	22	16	28	17	35	33	20	15	26.8	
Kansas City. Maximum...	60	67	63	66	53	64	54	67	62	51	48	49	44	43	34	33	33	34	46	57	52	28	30	37	49	42	49	44	39	42	41	47.8	
Kansas City. Minimum...	36	41	44	39	35	31	34	33	41	32	28	33	32	28	16	12	19	14	23	33	28	15	23	25	23	29	23	39	33	30	33	29.2	
Kirksville. Maximum...	54	58	60	65	56	53	53	62	62	55	44	46	40	38	33	23	32	31	38	51	52	39	23	35	41	38	43	41	37	36	32	44.2	
Kirksville. Minimum...	21	36	41	32	32	30	29	47	30	29	25	32	25	23	7	19	13	4	29	33	8	13	22	6	29	19	36	33	21	21	24.7		
Lawson. Maximum...	59	68	61	67	54	63	57	62	57	52	46	49	42	41	36	27	34	32	44	54	51	39	28	35	45	38	45	42	39	39	34	46.5	
Lawson. Minimum...	31	37	40	45	35	32	32	37	47	28	26	29	33	24	19	4	25	11	17	32	39	11	15	21	18	26	23	37	33	25	28	27.7	
Louisiana. Maximum...	56	60	62	60	40	45	50	65	67	55	42	43	40	40	33	30	32	36	38	55	55	24	23	40	42	43	42	42	40	30	30	48.9	
Louisiana. Minimum...	30	40	43	30	35	25	30	28	40	38	33	24	30	32	30	22	24	20	8	24	20	16	12	23	15	30	16	30	30	24	9	26.2	
Macon\$. Maximum...	54	60	62	67	48	57	57	66	65	49	46	46	40	42	29	28	32	29	40	51	53	26	31	37	45	38	44	40	40	37	35	43	45.1
Macon\$. Minimum...	26	36	39	35	32	28	32	31	46	32	28	29	31	27	27	7	8	18	9	18	32	10	13	19	13	14	15	24	33	20	18	24.2	
Maryville. Maximum...	60	66	54	64	46	59	54	59	55	50	45	50	40	38	33	20	29	25	40	48	44	31	25	34	43	38	45	40	37	38	33	43.3	
Maryville. Minimum...	26	33	33	37	38	28	28	32	46	23	21	22	29	21	20	3	17	7	12	26	31	7	15	21	12	22	16	35	30	24	28	23.8	
Mexico\$. Maximum...	59	60	66	59	50	60	55	66	68	51	45	45	41	46	35	30	34	35	48	59	55	37	30	40	48	41	47	42	37	33	35	47.1	
Mexico\$. Minimum...	28	38	37	43	30	30	31	34	39	37	32	29	28	30	21	20	21	14	20	31	13	14	19	18	17	18	14	34	18	17	26.2		
Moberly. Maximum...	52	57	60	65	60	59	60	62	65	58	45	44	41	39	39	27	32	32	43	54	52	42	25	35	43	41	43	40	39	33	32	45.8	
Moberly. Minimum...	27	38	48	39	33	32	30	32	50	34	30	30	32	28	26	13	22	17	10	31	35	12	14	22	17	30	14	37	32	21	19	27.6	
Oregon. Maximum...	62	72	64	62	51	62	56	61	58	53	44	50	43	38	33	22	29	30	42	50	46	34	29	36	45	41	49	45	38	40	36	45.8	
Oregon. Minimum...	31	37	36	43	34	35	30	34	46	26	21	30	40	41	42	40	33	33	37	42	59	64	31	32	40	46	43	46	40	40	37	48	47.9
St. Charles \$. Maximum...	59	65	72	62	50	60	60	68	64	55	45	40	40	41	42	40	33	33	37	42	59	64	31	32	40	46	43	46	40	40	37	48	47.9
St. Charles \$. Minimum...	24	36	39	44	39	29	35	33	40	41	32	29	32	32	33	27	27	24	14	20	37	19	18	21	21	23	21	25	36	29	22	29.1	
St. Joseph. Maximum...	63	71	59	64	51	63	53	63	60	49	48	50	38	40	34	25	30	30	42	52	47	26	28	37	45	40	50	41	38	40	38	45.6	
St. Joseph. Minimum...	33	41	40	37	36	37	33	34	39	29	26	38	30	26	12	8	20	13	21	34	22	11	20	25	23	28	26	39	32	28	32	28.0	
Trenton. Maximum...	61	65	59	67	59	67	58	62	63	56	57	52	45	37	32	21	32	32	42	51	52	40	26	37	39	40	42	47	44	40	41	47.0	
Trenton. Minimum...	25	34	41	42	35	29	30	30	44	28	24	27	32	27	21	5	20	11	10	29	34	10	15	25	15	18	14	35	34	26	27	25.7	
Unionville \$. Maximum...	59	58	56	70	50	56	53	68	63	53	49	49	40	42	33	26	33	31	40	55	52	30	35	42	43	42	48	45	42	41	41	46.6	
Unionville \$. Minimum...	22	23	32	32	28	28	30	35	33	27	28	20	24	24	1	4	13	7	13	30	47	7	7	18	10	12	15	15	34	20	20	21.0	
Warrenton. Maximum...	58	65	68	68	57	60	58	66	65	62	41	40	40	42	40	29	32	32	43	55	60	57	24	37	45	45	46	45	39	37	33	48.1	
Warrenton. Minimum...	31	43	47	47	36	30	42	38	53	38	33	30	31	32	29	24	24	23	15	32	40	16	15	24	18	31	21	34	35	24	21	30.9	
Keokuk, Iowa. Maximum...	53	57	55	62	52	53	50	62	65	47	42	49	41	37	30	26	34	29	33	51	52	24	27	36	39	36	42	43	38	35	32	43.0	
Keokuk, Iowa. Minimum...	26	39	34																														







## CLIMATOLOGICAL DATA

## MISSOURI SECTION

W. J. MOXOM  
ST. LOUIS, MO.

VOL. XLIII

FEBRUARY 1939

No. 2

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## GENERAL SUMMARY

Several periods of cold weather during February 1939, which resulted in practically normal temperature conditions for the month as a whole, were highly beneficial in checking premature growth of vegetation, which had made good progress during the unusually mild weather of January. The average temperature of 33.0° for the State, is only 0.1° below normal, but it is the first month with below normal average since June 1938. Sub-zero temperatures occurred at a number of stations in the northern and west-central portions of the State on the 10th and 21st. The lowest being -9° at Conception, Nodaway County, on the 10th. Several counties in the southeast portion of the State experienced a sharp drop in temperature on the night of the 3d-4th, with sub-zero temperatures occurring at several stations. The lowest was -5° at Greenville and Advance. These unusually low temperatures were largely the result of rapid night radiation due to a heavy covering of snow.

The monthly precipitation of 3.17 inches, or 1.08 inches above normal, was fairly well distributed, but with the greater portion over the southern half of the State. The amounts were adequate for all immediate needs, and subsoil moisture is now restored to a near normal condition in most sections. The snowfall averaged 8.6 inches, or 3.5 inches above normal. The amounts reported ranged from a few tenths of an inch in the extreme southwestern portion to 19.0 inches at Warrensburg in the west-central portion. Snow depths were also comparatively light in the northeastern portion of the State.

## TEMPERATURE

The monthly mean for the State, 82 stations reporting, was 33.0°, or 0.1° below normal. The highest monthly mean was 40.2° at Caruthersville, and the lowest monthly mean was 23.8° at Tarkio. The highest recorded was 71° at Campbell on the 10th, and the lowest was 9° below zero at Conception on the 10th. The greatest daily range was 60° at Unionville on the 18th.

## PRECIPITATION

The average for the State, 144 stations reporting, was 3.17 inches, or 1.08 inches above normal. The greatest local monthly amount was 10.09 inches at New Madrid, and the least local monthly amount was 0.71 inch at La Belle. The greatest amount in any twenty-four hours was 2.42 inches at New Madrid on the 3d. The average number of days with 0.01 inch or more was 9.

## MISCELLANEOUS PHENOMENA

Duststorms.—7th, 19th, 20th.  
Floods.—Light overflows occurred in the Black River on 1st, and in the St. Francis River from January 31 to February 5; also on 22-23d. The Mississippi River, near Cairo, Ill., and below, was above flood stage from the 7th to end of month.  
Fog.—Dense, 3d, 4th, 5th, 6th, 9th, 14th, 17th, 18th, 19th, 27th, 28th.  
Glaze.—8th, 9th.  
Hail.—Light, 1st at Gorin, 9th in southwest St. Louis and Altona, 10th at Arcadia, New Madrid and Wappapello Dam. Moderate, 9th at Clifton Hill, Greenville, Perryville, and Van

Buren. Heavy, 9th at La Belle.

Halos.—Solar, 1st, 8th, 15th, 21st, 24th, 28th; lunar, 1st, 2d, 3d, 4th, 5th.

Sleet.—1st, 2d, 3d, 6th, 9th, 10th, 14th, 15th, 17th, 19th, 24th, 25th, 26th, 27th, 28th; much damage to wires at Lawson

(Continued on page 9)

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind				Relative humidity		Percentage of sunshine	
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12 noon		6:30 p. m.
Columbia.....	30.07	30.62	22	29.34	9	9.7	24	s.	7	76	62	61	46
Kansas City.....	30.06	30.68	22	29.80	28	11.5	36	n.w.	7	68	49	55	65
St. Joseph.....	30.06	30.66	22	29.37	28	10.6	30	n.w.	7	73	50	56	59
St. Louis.....	30.07	30.60	11	29.31	9	13.4	34	n.w.	9	72	63	64	40
Springfield.....	30.06	30.62	22	29.35	9	10.3	32	w.	28	79	63	64	51
Cairo, Ill.....	30.09	30.59	11	29.45	9	10.9	34	sw.	28	81	70	71	49
Keokuk, Iowa..	30.08	30.66	11	29.34	9	9.5	32	w.	10	72	56	60	44

## COMPARATIVE DATA FOR FEBRUARY

Year	Temperature			Precipitation					Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy
1888.....	33.0	73	-17	2.22	2.04	2.22	2.39	....	7	..	..	..
1889.....	29.3	73	-9	2.74	1.80	3.12	3.30	....	7	..	..	..
1890.....	35.5	81	-8	2.71	1.12	2.04	4.97	....	7	..	..	..
1891.....	32.7	78	-13	2.45	2.05	2.33	2.96	2.4	6	..	..	..
1892.....	37.7	71	2	4.31	3.47	5.40	4.06	..	9	7	..	16
1893.....	27.9	65	-20	2.17	2.02	1.49	2.99	4.6	6	10	3	11
1894.....	30.8	72	-12	2.70	2.15	2.01	3.93	11.2	6	10	3	10
1895.....	23.6	77	-26	0.57	0.48	0.55	0.67	3.3	5	10	10	8
1896.....	35.6	81	-10	1.67	1.50	1.22	2.30	4.1	5	12	8	9
1897.....	34.8	74	-15	2.51	1.47	2.79	3.27	8.2	7	7	7	14
1898.....	35.4	78	-9	1.61	1.54	1.47	1.81	9.8	5	13	6	9
1899.....	20.4	72	-32	2.30	1.75	2.06	3.10	5.3	6	12	8	8
1900.....	26.2	70	-16	4.00	3.87	3.35	4.77	16.6	10	10	6	12
1901.....	28.1	76	-19	1.74	1.41	1.51	2.31	7.6	6	13	7	8
1902.....	24.0	72	-17	1.62	0.89	2.10	1.88	5.6	5	11	8	9
1903.....	29.8	74	-25	3.25	1.98	3.34	4.42	5.8	7	11	6	11
1904.....	30.0	82	-18	1.02	0.64	0.63	1.78	1.5	5	11	8	10
1905.....	21.5	69	-40	1.68	1.72	1.69	1.63	13.2	8	11	6	11
1906.....	33.7	73	-13	2.42	2.66	2.17	2.43	4.8	7	15	6	7
1907.....	34.8	77	-15	1.28	0.79	0.92	2.12	4.5	6	12	5	11
1908.....	35.6	78	-7	4.32	2.83	4.20	5.94	4.1	9	13	6	10
1909.....	38.8	71	-4	3.24	2.37	2.52	4.82	3.1	9	13	5	10
1910.....	28.3	72	-24	2.17	0.92	1.89	3.71	10.2	6	13	5	10
1911.....	38.1	87	0	3.78	4.09	3.99	3.27	6.7	8	12	5	11
1912.....	28.3	72	-12	2.51	1.99	2.56	2.98	14.5	6	10	7	12
1913.....	29.8	78	-9	2.15	2.08	2.62	1.75	8.5	7	12	5	11
1914.....	28.3	75	-11	2.80	2.03	2.55	3.83	14.0	7	12	6	10
1915.....	39.4	72	7	3.07	2.48	3.53	3.21	4.1	8	9	5	14
1916.....	31.4	78	-12	0.98	0.79	0.73	1.42	5.0	6	13	6	10
1917.....	30.5	83	-22	0.42	0.16	0.24	0.85	1.4	2	14	7	7
1918.....	34.9	85	-25	1.06	1.25	0.80	1.12	0.6	4	15	6	7
1919.....	35.3	71	-10	1.96	1.98	2.08	1.82	6.4	7	13	4	11
1920.....	34.5	78	-5	0.62	0.33	0.40	1.14	1.2	4	11	6	12
1921.....	40.1	86	5	1.03	0.55	0.74	1.79	1.3	4	14	6	8
1922.....	35.4	80	-5	1.83	1.37	1.62	2.49	1.9	5	14	6	8
1923.....	30.2	75	-9	1.58	0.52	1.26	2.97	1.4	5	13	5	10
1924.....	33.8	79	-5	1.84	1.58	1.92	2.03	8.1	7	14	4	11
1925.....	38.7	78	1	1.88	1.85	1.42	2.37	1.7	6	12	6	10
1926.....	39.4	76	-4	2.07	1.93	1.81	2.46	2.9	6	11	6	11
1927.....	41.3	78	1	1.07	1.07	0.90	1.25	2.3	5	10	8	10
1928.....	37.0	73	-2	2.27	2.18	2.17	2.47	1.8	7	12	6	11
1929.....	25.0	64	-23	1.96	1.31	1.72	2.86	9.4	7	10	5	13
1930.....	44.5	89	-5	1.75	0.95	1.49	2.80	1.3	4	13	8	7
1931.....	40.9	75	5	2.49	1.46	2.82	3.20	0.3	6	12	6	10
1932.....	42.4	83	-3	1.47	1.00	0.99	2.43	2.0	6	12	7	10
1933.....	32.2	78	-22	1.45	0.74	1.26	2.35	4.2	5	14	7	7
1934.....	32.5	79	-26	1.34	1.00	1.32	1.70	7.0	5	15	6	7
1935.....	37.4	80	0	1.54	1.63	1.45	1.55	0.2	5	10	6	12
1936.....	23.2	78	-25	1.50	1.43	1.33	1.73	4.1	6	12	7	10
1937.....	32.4	74	-15	1.38	1.20	1.46	1.48	3.5	6	11	7	10
1938.....	41.4	80	-5	3.20	1.47	3.60	4.54	5.0	7	8	6	14
1939.....	33.0	71	-9	3.17	1.73	2.70	5.08	8.6	9	11	6	11
Period.....	33.1	89	-40	2.09	1.61	1.97	2.70	5.1	6	12	6	10



## Climatological Data for February 1939

Stations	Counties	Elevation, feet	Temperature, in degrees Fahr.							Precipitation, in inches				Number of days				Prevailing direction of wind	Observers		
			Length of record, years	Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Length of record, years	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelting	With precip., .01 inch or more	Clear			Partly cloudy	Cloudy
Northern Division																					
Bethany	Harrison	916	44	27.3	- 0.2	56	7†	- 5	10	48	46	0.98	-0.44	0.71	6.8	4	16	6	6	n.w.	A. S. Cumming
Brunswick	Chariton	652	58	28.1	- 1.7	64	7	- 1	10†	51	60	1.26	-0.55	0.88	3.6	5	10	6	12	n.w.	O. K. Benecke
Canton, Lock & Dam 20	Lewis	488	1	29.8	.....	63	13	- 1	10	40	9	1.41	+0.15	0.78	1.2	7	8	8	12	sw.	Lockmaster
Chillicothe	Livingston	779	30	26.8	.....	59	13	- 4	10	51	33	1.09	-0.36	0.98	7.4	4	18	4	6	se.	Wm. J. Olenhouse
Clifton Hill	Randolph	731	40	30.9	+ 0.7	59	13	- 3	21	45	30	1.81	+0.07	0.88	6.5	8	9	8	11	n.w.	Dr. A. J. Bradsher
Columbia	Boone	740	49	31.6	- 0.8	55	13	- 2	21	37	49	2.45	+0.41	1.16	7.8	9	7	10	11	s.	U. S. Weather Bureau
Conception	Nodaway	980	50	27.0	- 1.2	58	7	- 9	10	55	55	1.53	+0.28	0.98	10.0	4	12	9	7	n.w.	Fr. Adelhelm Hess
Edgerton	Platte	856	19	29.6	+ 4.7	60	7†	- 4	21	52	28	1.46	+0.12	1.08	9.4	9	22	2	4	n.	Fred L. Stiff
Elsberry	Lincoln	419	8	32.4	.....	61	13	4	23	47	8	3.07	.....	1.10	5.0	7	7	9	12	n.	Ray E. Mills
Fayette	Howard	799	59	31.9	+ 1.3	62	13	0	10†	45	56	1.49	-0.21	0.63	4.9	6	11	7	10	n.w.	Morrison Observatory
Fulton	Callaway	818	51	29.5	- 3.6	63	13	- 3	21	46	47	2.60	+0.93	1.10	6.5	7	10	6	12	n.	Clyde C. Herring
Grant City	Worth	1,134	35	26.4	- 2.2	56	7	- 8	10	52	47	1.06	-0.05	0.58	10.0	2	13	5	10	ne.	Howard Kybolt
Hannibal	Marion	759	47	30.6	+ 0.9	61	13	0	10	47	55	1.96	+0.10	1.09	3.0	8	8	7	13	n.w.	Hannibal Water Dept.
Kansas City Airport	Jackson	741	50	29.4	- 1.8	61	7	- 1	10	42	50	0.98	-0.77	0.73	5.8	5	11	6	11	sw.	U. S. Weather Bureau
Kansas City Univ. H.	Jackson	908	1	32.4	.....	61	7	0	21	50	1	1.81	.....	1.34	4.8	5	16	4	8	n.w.	University of Kansas City
Kidder	Caldwell	1,020	47	28.8	+ 0.4	59	1	- 1	21	46	51	1.56	+0.02	1.32	16.0	4	18	2	8	ne.	Mrs. Geraldine Terry
King City	Gentry	1,095	.....	.....	.....	.....	.....	.....	.....	13	154	+0.04	1.25	10.2	5	8	12	8	sw.	John M. Martin	
Kirkville	Adair	969	50	28.3	+ 1.2	58	13	- 5	10	44	57	1.81	+0.28	1.59	6.0	5	16	7	n.w.	Charles Noble	
Lawson	Ray	1,070	1	29.5	.....	58	13	- 3	10†	51	1	1.72	.....	1.56	11.6	6	12	6	10	n.w.	Elmer E. Lamb
Linn	Linn	816	.....	.....	.....	.....	.....	.....	.....	7	0.96	.....	0.71	5.2	4	10	10	8	n.w.	H. D. Taggart	
Louisiana	Pike	469	45	30.2	- 0.7	60	13†	- 4	10	38	58	3.35	+1.27	1.75	5.0	7	19	2	7	n.w.	Stark Bro's Nurseries
Macon	Macon	875	40	26.2	- 3.4	60	13	- 3	10	47	46	1.21	-0.49	0.67	4.0	4	12	9	7	n.w.	Mrs. W. C. Brown
Maryville	Nodaway	1,169	49	25.8	0.0	57	7	- 8	10	49	45	1.03	-0.40	0.63	7.2	4	12	6	10	n.w.	R. B. Montgomery
Memphis	Scotland	787	0	24.2	.....	58	13†	- 3	10†	51	9	1.03	+0.06	0.59	4.0	4	6	13	9	n.w.	John W. Alexander
Mexico	Audrain	800	50	29.0	- 1.1	65	13	0	21	47	61	3.16	+1.31	1.29	8.8	9	.....	.....	.....	n.w.	Mrs. Abbie Snoddy
Moberly	Randolph	875	2	30.1	.....	60	13	- 1	10†	48	2	1.11	.....	0.50	2.3	6	10	10	8	w.	McCormick Hospital
Oregon	Holt	1,018	83	28.1	- 0.7	60	7	- 6	10	54	83	1.40	+0.03	0.95	11.5	4	15	5	8	n.w.	Miss Mina Wright
St. Charles	St. Charles	520	51	32.2	- 1.1	64	13	11	21	41	61	3.00	+0.01	1.18	7.5	8	10	8	10	sw.	Martin L. Comann
St. Joseph	Buchanan	957	29	27.0	- 2.6	60	7	- 4	10	46	67	1.26	-0.41	0.94	9.9	6	12	6	10	n.w.	U. S. Weather Bureau
Steffenville	Lewis	650	41	30.3	+ 0.6	60	13	0	10	41	46	1.42	-0.35	0.52	4.0	6	10	13	5	n.	Frank Hall
Tarkio	Atchison	916	36	23.8	- 5.2	55	7†	- 8	10	44	45	1.13	-0.15	0.78	10.0	4	14	8	6	n.w.	Albert Volker
Trenton	Grundy	822	43	28.8	- 0.6	58	13	- 4	10	45	44	1.06	-0.52	0.77	6.5	6	8	17	3	n.	W. H. Estes
Unionville	Putnam	1,062	46	24.9	- 1.8	62	18	- 6	10	60	46	1.62	-0.15	1.36	13.0	5	21	4	3	n.w.	John H. Schick
Warrenton	Warren	816	57	33.8	+ 2.9	62	13	4	21	49	49	4.27	+2.38	1.56	9.0	8	5	11	12	n.w.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.	574	67	28.1	- 0.2	60	13	0	10	35	67	1.48	-0.07	0.94	0.9	8	4	10	14	n.w.	U. S. Weather Bureau
Division means and extremes																					
Southeastern Division																					
Appleton City	St. Clair	813	44	33.5	- 0.4	64	13	- 4	21	43	47	1.72	+0.05	0.66	7.5	7	15	0	13	sw.	Rolla Brown
Bolivar	Polk	1,071	36	35.8	+ 0.6	64	13	1	21	42	44	2.71	+0.61	0.84	7.4	10	10	5	13	s.	Southwest Baptist College
Boonville	Cooper	650	1	28.4	.....	62	13	1	10†	43	62	2.08	+0.30	0.92	7.5	5	11	4	13	se.	Boonville Water Dept.
Clinton	Henry	765	46	33.4	- 0.2	63	13	- 4	21	42	52	1.67	-0.28	0.60	6.6	10	.....	.....	.....	.....	U. S. Weather Bureau
Dean H.	McDonald	1,000	35	36.5	+ 0.8	68	13	4	21	41	40	3.56	+1.78	1.57	1.0	8	12	5	11	ne.	E. S. Taylor
Eldon	Miller	934	44	30.1†	- 3.0	65	13	3	21†	45	40	3.13	+1.31	1.45	7.6	8	7	10	11	se.	E. H. Shepherd
Garber	Taney	950	5	36.8	.....	69	13	5	11	50	5	3.91	.....	1.42	4.0	10	12	2	14	ne.	William H. Durham
Harrisonville	Cass	904	61	28.0	- 2.7	61	13	- 6	21†	53	64	1.32	-0.41	0.74	13.5	5	8	9	11	n.w.	John H. Patterson
Jefferson City	Cole	557	49	29.4	- 2.7	65	13	3	21†	44	57	2.79	+1.03	0.98	8.0	6	10	7	11	e.	Mrs. Frank Kliegel
Lakeside	Miller	595	8	31.9	.....	66	13	6	21†	43	8	3.67	.....	1.32	.....	10	.....	.....	.....	n.w.	W. S. Frame
Lamar	Barton	980	51	32.1	- 3.2	65	13	1	21†	42	58	1.93	+0.16	0.60	9.0	6	12	5	11	sw.	Jesse A. Mann
Lebanon	Laclede	1,265	51	35.0	+ 0.6	65	13	5	21	47	52	3.07	+0.88	0.56	8.0	10	11	4	13	s.	Mrs. Rosa E. Montelius
Lexington	Lafayette	688	54	29.0	- 2.0	62	13	- 1	10†	49	55	1.60	-0.24	1.16	7.7	7	14	10	4	w.	Miss Carrie Loomis
Lockwood	Dade	1,078	33	35.3	- 1.7	60	7†	1	21	39	43	3.64	+1.91	1.40	9.0	9	12	6	10	n.w.	Hubert A. Nieman
Marshall	Saline	779	52	32.6	+ 1.7	62	13	0	10†	45	49	1.07	-0.71	0.40	10.0	6	18	6	4	sw.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	38	36.4	+ 1.3	63	13	8	21	48	42	4.02	+1.79	1.30	6.5	12	10	7	11	se.	Mo. Fruit Exp. Station
Mount Vernon	Lawrence	1,174	27	36.0	+ 1.5	64	13	3	21	36	39	3.85	+1.25	0.97	7.2	10	9	12	7	se.	G. H. Boswell
Neosho	Newton	1,011	52	37.8	+ 0.2	67	13	4	21	41	56	3.00	+1.01	1.17	1.7	10	12	6	10	n.w.	U. S. Fisheries Station
Nevada	Vernon	862	46	35.2	+ 1.3	68	7	- 3	21	41	47	1.22	-0.53	0.40	4.0	7	13	5	10	sw.	T. J. Kaupp
Sedalia	Pettis	910	26	34.8	+ 4.4	64	13	- 4	21	47	28	1.99	-0.15	0.80	7.4	9	13	5	10	sw.	Dr. J. E. Cannaday
Seligman	Barry	1,542	38	37.8	+ 0.3	65	13	3	21	42	36	4.70	+2.86	1.53	5.0	6	13	3	12	ne.	Floyd E. Fawver
Seymour(near)	Webster	1,642	33	35.4	+ 0.4	62	13	5	21	43	33	3.61	+1.43	1.92	6.5	9	9	7	12	se.	A. L. Hailey
Springfield	Greene	1,301	51	34.3	- 0.9	64	13	4	21	34	51	3.98	+1.63	1.47	7.8	10	8	8	12	se.	U. S. Weather Bureau
Versailles	Morgan	1,037	12	35.0	+ 0.8	67	13	0	21	47	15	3.08	+1.51	1.48	5.2	10	9	8	11	n.w.	I. M. Wilson
Warrensburg	Johnson	878	52	33.2	+ 0.7	63	13	- 2	21	44	59	1.43	-0.45	0.92	19.0	6	16	3	9	sw.	E. A. Markey
Warsaw	Benton	687	38	34.6	- 1.0	66	13	- 2	21	48	44	2.82	+0.58	1.24	4.5	9	14	1	13	n.	Everett Martin
Division means and extremes																					
Southeastern Division																					
Advance	Stoddard	355	2	36.7	.....	69	10	- 5	4	41	2	5.89	.....	0.97	11.6	15	.....	.....	.....	.....	U. S. Weather Bureau
Arcadia	Iron	926	58	33.0	- 1.1	64	9	7	23	46	61	4.29	+1.81	0.82	10.2	1					



Daily Precipitation for February 1939																																		
Stations	Drainage-basins	Day of month																																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	..	..	..	Total	
Northern Division																																		
Anity <sup>2</sup>	Grand	.18								T.	.20						T.	.07		T.		.01								1.10			1.56	
Bothany	do										.20										T.								.30		.41		0.98	
Bowling Green <sup>2</sup>	Mississippi									T.	1.07											.75	.03								.29		2.44	
Brunswick <sup>2</sup>	Grand										.22									T.		.02	.12						.30				2.44	
Canton, Lock No. 20 <sup>2</sup>	Mississippi	.03								T.	.78									.02		.06	.07	.02	T.				.02		.88		1.26	
Centralia <sup>2</sup>	do										1.55										.32	T.							T.			2.66		
Chillicothe <sup>2</sup>	Grand										.88																		.24			1.09		
Clifton Hill	Chariton										.02									T.	.02		.07							.98		1.09		
Columbia <sup>1</sup>	Missouri					T.	T.			1.16	T.									.02	.42	.03	.06	.01					.08	.05	.65		2.45	
Conception	do									.43										T.	.02	T.							.14	.16	T.	.46	1.53	
Edgerton	Missouri									.15									.08	.01	.02	.03	.08	T.	.01					.66	.42		1.46	
Edina <sup>2</sup>	Mississippi	T.									.38																						1.01	
Elisberry	do	.11	T.				T.				.40																						3.07	
Farber <sup>2</sup>	do							T.			.96										1.10								.32	.03			2.99	
Fayette	Missouri	T.									.15										.61	.26	.15						.42				1.49	
Fulton <sup>2</sup>	do										.48										.04	T.	.05						.15	T.	.62		2.60	
Gallatin <sup>2</sup>	Grand	T.									1.10										.70	.08	.07						.25	.05			2.10	
Gorin	Mississippi	.10									.38									T.	T.		T.	T.	T.						T.	.58		1.18
Grant City	Grand										.48	T.								T.													1.06	
Hannibal	Mississippi						T.				.67	.42									.23	T.	.12	.01					.09	.02			1.96	
Hermann <sup>2</sup>	Missouri	.03									.98												.03						.40	.13			2.59	
Kahoka <sup>2</sup>	Mississippi	T.									.18	.30									.06		.03								.38		0.95	
Kansas City Airport <sup>2</sup>	Missouri						T.				.09										T.	T.	.14				T.	T.			.67	.06		0.98
Kansas City University	do									.11	T.										T.	T.		.13	T.					1.34	.20		1.81	
Kidder <sup>2</sup>	Grand										.18																						1.56	
King City	Missouri	.02									.25									.02	.03									.50	.75		1.54	
Kirksville	Mississippi									.16	.04										.02	T.									.04	1.55		1.81
LaBelle <sup>2</sup>	do										.39											.02	T.			.02	.02							0.71
Lawson	Missouri									.09	T.																				.84	.72		1.72
Linneus <sup>2</sup>	Grand	T.									.16										T.	.02	T.		.02	.03								0.96
Louisiana	Mississippi									1.00	.75											.73							.25				3.85	
Lucerne <sup>2</sup>	Grand	.02									.20																							0.76
Macon <sup>2</sup>	Chariton										.39											.07		.08									1.21	
Madison <sup>2</sup>	Mississippi	.02									1.04											.16		.06						.20			2.09	
Maryville	Missouri									.38										.02		T.	T.								.06			1.03
Memphis <sup>2</sup>	Mississippi	.12									.29										T.			.03	T.								1.03	
Mexico <sup>2</sup>	do	.05									1.29										.04		.52	.01	.15				.50	.20			3.16	
Milan <sup>2</sup>	Grand										.11										.05		.05	.03									1.11	
Moberly	Mississippi									.50	.14										T.	.05	T.	.05					.02				1.11	
Mourée City	do									.73	.34										.02		.09							.06			1.79	
Oregon	Missouri									.40	T.									.05											.25	.70	1.40	
Palmyra <sup>2</sup>	Mississippi	.02									.75											.07		.07					.05	T.			1.47	
Paris <sup>2</sup>	do	.02									1.04											.16		.06					.07	.03			1.97	
Perry <sup>2</sup>	do										1.10											.20		.07					.35	.02			2.12	
Philadelphia <sup>2</sup>	do	.04									.36													.15						.07			1.34	
St. Charles <sup>2</sup>	Missouri		.03								.78																			.31	.12			3.00
St. Joseph <sup>1</sup>	do									.24										.05		.01	T.	.02							.80	.14		1.26
Saverton, Lock No. 22 <sup>2</sup>	Mississippi	T.									.92											.30		.11		.01			.07	.03			1.69	
Shelbina	do									.88												.22		.10									1.85	
Shelbyville <sup>2</sup>	do										.68											.11		.16									1.63	
Steffensville	do	.05									.44											.14	.07										1.42	
Tarkio	Missouri										.25																				.10	.68		1.13
Trenton	Grand									.16										.10		.02	.06		.05								1.06	
Troy <sup>2</sup>	Mississippi										.94											.70	.45	.08					.28	.06			2.81	
Unionville <sup>2</sup>	Chariton	.06									.17										.02		.01										1.62	
Warrenton	Mississippi	.50									.60	.50										1.56	T.	.15	T.				.50	.05			4.27	
Keokuk, Iowa <sup>1</sup>	do	.09									.94	T.								.02	T.	.05	T.	.03	T.	.01				.14	.20		1.48	
Southwestern Division																																		
Altona <sup>2</sup>	Osage										.08													.10					.30	T.			1.08	
Appleton City	do										.13	T.									.15	.19		.13					.50		.22	.40	1.72	
Bollivar	do						.08				.64	.20										.16	.44	T.	.03			T.		.57	.04	.29	.26	2.71
Boonville <sup>2</sup>	Missouri																																	



## Daily Precipitation for February 1939—Continued from preceding page

Stations	Drainage-basins	Day of month																														Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	..	..		..
<i>Southeastern Division—Concluded</i>																																	
Bragg City <sup>2</sup>	St. Francis		1.30	1.90			T.				.32	1.10				1.33			T.	.20	1.10					.45	.15		1.20				9.15
Campbell	do	.12	2.20	1.54			.10				.34	.38			.54	.58		T.	.15	.95		.01				.59	.01	.20	.63				8.34
Cape Girardeau <sup>2</sup>	Mississippi		.73	.58	.14		.03				.31	1.10				.63				.23	.76	.01				.34	.12		.62				5.60
Caruthersville <sup>2</sup>	do	1.30	*	1.60					.25	.94					1.47			.05			.31	1.00	.05				.40	.22		1.20			8.79
Centerville <sup>2</sup>	Black		.24	*			.21				.15	.52				T.			.11		1.10					.35				1.35			4.03
Crystal City <sup>2</sup>	Mississippi						.20				.02	1.25								*	.94	.03	T.			.44	*	.14	.41				3.43
Cuba <sup>2</sup>	Meramec										.92										1.12					.55				.74			3.33
Dexter <sup>2</sup>	St. Francis	2.03	1.30	.02			.18				.40	.88				1.03				.10	.75	T.				.50	.10		1.03				8.14
Doniphan	Black	.45	.66	.70			.18				.62	.54			.52	.05			.22	1.00				T.		.42	.01	.15	.82				6.54
Farmington	St. Francis	.17	T.				.28				.43	1.00			.07				.32	.88		.02	T.			.62							4.57
Fisk <sup>2</sup>	do	1.47	.92	.06			T.				1.56				.67	T.				T.	.96					.33	.61		.89				7.17
Fredericktown <sup>2</sup>	do		.05	T.			.14				.07	.80			.17					.21	.80					.40	.14		1.01				3.79
Goodland	Black	.20									.30	.35							.30	1.05		.02			1.00				.35				3.57
Greenville	St. Francis	.15		.93			.16				.44	.23				.48			.20	.74					1.05			.56	.42				5.36
Jackson	Mississippi	1.35	.56	.72			.19				.65				.51				.21	.73		.05	T.			.74			.14	.97			6.82
Jerome <sup>2</sup>	Gasconade										.35								1.50		.08					.65	.10		.55				3.23
Koshkonnong	Black	.04	.18	.60							.37	.47			.55			.03	.23	.83		T.			.03	.44	T.	.65	.15				4.57
Leeper <sup>2</sup>	do		.20	.38	.04						.10	.68				.37				.33	.78					.44	.22		1.03				4.57
Licking (near)	Gasconade	.04					.10				.30	.32			T.	T.			.21	.36		T.			*	.37		.23	.16				2.99
Marble Hill	Mississippi	.10	.40	.40			.10				.50	.35			.10	.30			.10	.70							.65		.90				4.60
Meramec Park <sup>2</sup>	Meramec						.24				.10	.82							.91	.34	.07				.41	.53		.43					3.85
Morehouse	Mississippi	.11	1.96	1.23							.83	.53			.39	.49			.08	.95		T.				.53	.09	T.	.73				7.92
New Madrid <sup>2</sup>	do		1.51	2.42	.20		.09				.03	1.18	.01			1.33			T.	.14	1.11	.10				.14	.57		1.26				10.09
Owensville <sup>2</sup>	Gasconade										.76									1.10	.55					.45	.30						3.16
Pacific <sup>2</sup>	Meramec										1.00										.87	.05				.70	T.		T.				2.62
Parma <sup>2</sup>	St. Francis		1.85	2.05	.07						.16	1.07			1.31						1.15	.07				.08	T.	.65	.90				9.36
Poplar Bluff <sup>2</sup>	Black	.02	.94	.60	.10		.15				.32	.85				.73			.08	.10	.88					.61	.13		1.05				6.56
Richwoods <sup>2</sup>	Meramec						.20					.70								1.01	.05	.01				.40	.10		.50				3.06
Rolla	do						.07				.21	.51						T.	.07	1.09	T.	.05				.15	.01	.31	.15				2.62
St. Louis <sup>1†</sup>	Mississippi	.08					.08				.75	.01						T.	.02	.99	.03	.05	T.			.09	.65	.06	.38	.03			3.22
St. Louis Airport <sup>3†</sup>	Missouri	.06					T.				.81	T.						T.	.07	.99	.03	.01	T.			.08	.52	T.	.24	.01			2.82
St. Louis University <sup>3†</sup>	Mississippi	.08					.07				.91	.01							.03	.88	.05	.01	T.			.10	.65	.01	.39	.03			3.22
Salem <sup>2</sup>	Meramec	.55					.19				.68								.30	1.50		T.				.90	.06		.50				4.68
Stikeston <sup>2</sup>	Mississippi	*	*	3.95							.18	1.33				.95				.10	1.05	.10				.30			.75				8.71
Union	Meramec						.01				.50	.45							1.09		.05					.54	.10		.35				3.09
Valley Park <sup>2</sup>	do		.04				.05				T.	1.07						T.		.06	.80	.07				.30	.20		.25				2.84
Van Buren	Black	*	.43				.13				*	.67			.25				.19	.75						.38	.21	*	.45				3.46
Wappapello Dam <sup>2</sup>	St. Francis	.01	.70	.90	.03		.15				.16	.88				.67			T.	.02	.08	.94				.60	.25		1.20				6.59
Washington Univ. <sup>2†</sup>	Mississippi		.07				.01	.04				1.06								.15	.95	.05				.33	.33		.36				3.35
West Plains	Black	.02	.14	.29			.14				.08	.40			.26	T.		.03		.17	.95		T.			.02	.66	T.	.59	.11			3.86
Williamsville <sup>2</sup>	do		.49	.64	.04		.12				.24	.80				.50			.07	.21	.80					.48	.15		1.05				5.59
Willow Sprgs. (near) <sup>2</sup>	White		.35	.02			.25				.09	.62				.12				1.10	.76	.01				.75			.73				4.80
Zalma (near) <sup>2</sup>	Mississippi		.54	.48			.19				*	1.04				.36			T.		.28	.76				.71	.23		.80				5.39
Cairo, Ill. <sup>1†</sup>	do	.54	1.84	.74			.10				1.20	.04			.77				T.	.13	.99		.10	T.		.05	.40	T.	.80				7.70

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation.

<sup>1</sup> First-order Weather Bureau station; precipitation is for the 24-hour period, midnight to midnight, unless otherwise indicated. <sup>2</sup> Precipitation is measured in the morning; amount then recorded is for the preceding 24 hours. <sup>3</sup> Precipitation is for 24-hour period, midnight to midnight. <sup>†</sup> Precipitation measured with recording gage. \* Included in next measurement. T. Trace, or precipitation less than 0.01 inch. † Estimated. ‡ Partially estimated. || Incomplete.

NOTE.—In addition to the stations shown on daily temperature page, records of daily temperatures are kept at the following stations in Missouri: Advance, Appleton City, Bethany, Bolivar, Booneville, Campbell, Canton Lock No. 20, Clifton Hill, Columbia Airport, Conception, Dean, Edgerton, Elsberry, Fulton, Goodland, Greenville, Kansas City University, Kidder, Kirksville Airport, Koshkonong, Lakeside, Licking (near), Lockwood, Marble Hill, Memphis, Mount Vernon, St. Joseph Airport, St. Louis Airport, St. Louis University, Saverton Lock No. 22, Seligman, Seymour (near), Springfield Airport, Steffenville, Tarkio, Versailles, Wappapello Dam, Warsaw, and Washington University.

## Daily Evaporation (inches), Mean Temperature (°F), and Wind Movement (miles) for February 1939

(See precipitation data in daily precipitation table)

Station	Data	Day of month																														Monthly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	..	..	
Columbia.....	Evaporation .....																															....
	Mean temperature ..																															....
	Wind movement ..																															....
Lakeside .....	Evaporation .....	.009	.085	*	*	.184	.006	.092	.198	.062	*	*	*	.361	.107	.028	*	*	.125													1.955
	Mean temperature ..	.42	.31	.30	.30	.36	.47	.41	.28	.38	.14	.24	.32	.50	.31	.27	.39	.32	.40	.42	.18	.14	.16	.34	.30	.27	.31	.32	.35			31.9
	Wind movement ..	102	97	69	27	98	31	47	119	65	138	63	18	65	88	40	55	92	33	64	107	100	106	54	89	52	32	14	77			1,942
St. Louis (Washington University)	Evaporation .....	.099	.006	.041	*	*	.106	.004	.081	.056	.020	*	*	.160	.073	.001	*	.092	.039	.023	.078											1.231
	Mean temperature ..	.40	.36	.26	.29	.33	.38	.42	.31	.46	.18	.22	.34	.46	.32	.30	.32	.33	.44	.48	.25	.16	.18	.34	.26	.24	.31	.34	.38			82.6
	Wind movement ..	49	48	88	58	42	49	20	52	88	81	46	28	53	73	15	120	43	18	67	65	99	42	38	82	124	32	20	96			1,636

Observations taken at 8:00



Daily Temperatures for February 1939

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	..	..	..	Mean
Northern Division																																
Brunswick §§	Maximum	58	30	31	47	48	51	64	27	41	17	33	52	62	33	32	42	40	55	58	16	21	22	58	31	33	42	43	33	..	..	40.0
	Minimum	24	19	19	18	19	28	26	15	10	-1	-1	3	25	27	24	19	13	12	25	11	0	-1	7	17	21	22	24	28	..	..	16.2
Chillicothe §§	Maximum	55	30	32	46	43	49	57	27	36	15	35	56	59	26	27	41	41	55	53	32	22	24	54	30	37	44	37	31	..	..	39.1
	Minimum	28	15	15	19	19	28	25	6	6	-4	-1	5	27	22	15	15	7	9	31	8	1	2	7	17	18	13	24	30	..	..	14.4
Columbia	Maximum	55	37	29	43	56	51	58	46	49	25	34	52	65	32	31	48	38	54	57	28	19	21	53	35	29	87	37	37	..	..	41.3
	Minimum	36	24	20	19	28	30	29	18	25	3	8	27	32	25	23	25	16	28	28	13	2	9	16	25	23	24	31	25	..	..	21.9
Fayette	Maximum	55	46	30	43	52	50	58	53	41	45	33	51	62	56	32	41	41	51	56	34	19	21	54	47	31	39	48	35	..	..	43.8
	Minimum	33	20	19	17	27	27	27	13	22	0	4	22	34	25	22	23	13	27	34	12	0	7	10	22	21	25	27	28	..	..	20.0
Grant City	Maximum	41	32	33	44	48	49	56	51	31	22	29	51	52	43	32	28	43	55	55	28	23	23	52	36	36	45	87	31	..	..	39.5
	Minimum	31	12	9	18	27	21	25	-1	12	-8	-2	20	32	18	7	17	0	28	26	2	-3	0	7	13	10	9	21	21	..	..	18.3
Hannibal	Maximum	49	46	26	39	46	48	50	45	41	47	30	50	61	52	28	36	37	54	56	48	21	17	47	44	27	37	36	36	..	..	41.2
	Minimum	29	20	15	13	25	32	26	14	21	0	2	23	43	25	16	21	11	28	47	12	2	10	14	16	21	22	22	29	..	..	20.0
Kansas City Airport	Maximum	50	30	38	47	53	52	61	20	37	18	38	57	58	43	31	54	44	51	55	14	24	25	59	36	38	45	34	35	..	..	41.0
	Minimum	30	18	19	26	33	30	19	7	6	-1	6	29	30	23	22	15	12	28	14	5	0	6	19	22	22	16	25	21	..	..	17.9
Kirksville	Maximum	56	48	29	41	39	49	49	45	36	38	29	51	58	51	33	35	38	56	53	33	21	21	49	47	31	41	40	33	..	..	41.1
	Minimum	29	14	13	18	22	22	20	5	14	-5	0	21	38	21	12	18	7	20	32	9	3	6	5	14	16	22	19	25	..	..	15.5
Lawson	Maximum	52	38	33	45	47	48	57	55	34	31	34	54	58	41	32	45	42	52	53	29	21	22	57	40	36	42	35	32	..	..	41.6
	Minimum	32	15	16	19	28	31	29	4	16	-3	1	23	38	22	18	23	5	25	29	6	-3	3	12	21	18	13	23	..	..	..	17.4
Louisiana	Maximum	46	32	30	40	50	46	50	30	45	35	36	46	60	37	30	38	40	57	60	30	20	20	46	30	35	42	40	37	..	..	39.6
	Minimum	30	25	19	7	22	32	24	22	22	4	21	27	36	28	20	16	27	26	16	5	10	8	21	22	22	20	33	..	..	..	20.9
Macon§§	Maximum	56	29	29	42	45	51	55	26	40	17	34	50	60	32	27	37	40	54	54	17	20	24	48	30	30	40	35	34	..	..	37.7
	Minimum	22	16	15	15	27	28	23	9	9	-3	3	32	23	16	15	9	11	33	9	-1	0	4	6	15	17	21	22	25	..	..	14.8
Maryville	Maximum	43	31	29	44	47	47	57	48	29	18	29	50	50	39	34	27	42	54	47	22	23	20	51	38	34	43	37	31	..	..	38.0
	Minimum	31	12	9	19	26	25	28	-1	11	-8	-1	20	31	15	11	18	0	27	22	0	-3	0	9	11	11	14	22	22	..	..	13.6
Mexico§§	Maximum	51	32	30	42	55	49	58	41	49	19	45	53	65	30	31	42	42	58	58	30	21	23	52	30	29	40	37	38	..	..	41.2
	Minimum	23	23	18	15	12	30	24	18	18	2	-2	6	27	26	22	10	13	29	15	0	1	8	13	20	21	23	30	..	..	..	16.9
Moberly	Maximum	54	48	27	39	42	46	52	50	47	47	28	43	60	55	30	39	37	51	52	50	18	18	50	50	31	32	33	33	..	..	41.5
	Minimum	31	18	17	15	15	28	23	11	19	-1	3	25	36	26	18	20	11	27	45	10	-1	5	11	20	20	21	23	27	..	..	18.7
Oregon	Maximum	45	32	36	48	49	50	60	54	28	17	33	54	51	43	36	31	46	52	49	22	26	24	55	40	35	46	38	32	..	..	40.4
	Minimum	32	13	12	22	30	26	31	0	13	-6	2	24	30	16	13	18	5	29	22	3	-2	2	14	18	15	13	24	23	..	..	15.8
St. Charles §§	Maximum	50	33	33	40	57	49	55	34	62	21	31	55	64	32	35	42	46	59	59	28	25	24	52	34	30	41	42	41	..	..	41.9
	Minimum	25	25	24	18	20	30	26	27	21	13	15	16	31	30	25	21	23	24	32	21	11	12	12	19	23	23	30	32	..	..	22.5
St. Joseph	Maximum	48	31	34	47	49	49	60	18	31	13	35	55	53	39	30	35	45	52	51	11	25	23	56	32	37	44	34	32	..	..	38.2
	Minimum	25	16	17	22	32	28	14	3	0	-4	5	27	27	19	17	13	8	31	11	4	0	4	18	22	18	17	27	20	..	..	15.8
Trenton	Maximum	52	40	28	44	45	49	56	45	35	26	31	54	58	48	36	34	40	57	50	40	20	23	54	46	36	44	37	32	..	..	41.4
	Minimum	35	14	13	17	28	26	24	4	14	-4	-1	20	34	20	12	20	5	29	40	7	0	4	9	16	11	21	24	..	..	..	16.3
Unionville §§	Maximum	55	33	38	47	44	51	46	24	37	19	28	57	60	39	29	36	42	62	54	18	27	26	58	30	35	43	47	36	..	..	39.9
	Minimum	23	12	10	10	16	20	22	3	-6	1	1	22	18	11	10	2	2	26	7	0	1	4	10	10	10	11	20	..	..	..	9.9
Warrenton	Maximum	51	51	27	42	54	48	56	51	45	56	35	52	62	61	31	45	45	57	58	51	23	20	53	52	30	36	38	39	..	..	45.3
	Minimum	31	26	20	16	23	38	28	22	23	7	8	24	35	24	22	21	20	26	48	17	4	10	9	23	22	22	27	32	..	..	22.4
Keokuk, Iowa	Maximum	53	32	25	40	40	49	45	45	43	30	29	52	60	31	27	35	38	56	56	22	20	19	45	26	28	35	39	35	..	..	37.7
	Minimum	32	17	15	18	27	30	26	10	18	0	3	26	31	24	13	27	9	32	22	12	6	11	12	14	20	25	25	22	..	..	18.5
Southwestern Division																																
Clinton	Maximum	57	42	34	46	55	55	61	52	49	42	40	53	63	54	31	53	50	48	57	38	21	27	54	49	29	39	37	35	..	..	45.4
	Minimum	35	22	22	19	28	40	29	12	23	2	8	22	37	28	21	28	15	24	36												







## CLIMATOLOGICAL DATA

## MISSOURI SECTION

W. J. MOXOM  
ST. LOUIS, MO.

Vol. XLIII

MARCH 1939

No. 3

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## GENERAL SUMMARY

The comparatively cold weather of February was highly favorable for fruit, and most buds were still dormant at the beginning of March. The gradual increase in temperature and frequent precipitation during the first half of month started rapid growth of vegetation. Wheat, pastures and meadows made rapid improvement. There was some drilling and disking for oats in the southwest portion, but the ground was generally too wet for much field work, and by the middle of the month the season was two to three weeks late. The dry weather and unusually mild temperatures between the 13th and 25th made possible the accomplishment of much delayed outdoor work. However, the frequent general showers during the last few days of the month caused further delay in soil preparation and planting, which was incomplete. Fruit trees were budding nicely, with some blooms reported by end of month.

The precipitation over the northern part of the State was generally above normal, and more than two inches above normal in some localities. In south-central and southwestern counties the amounts were considerably less than normal, but were sufficient for current needs.

## TEMPERATURE

The monthly mean for the State, 84 stations reporting, was  $47.1^{\circ}$ , or  $3.1^{\circ}$  above normal. The highest monthly mean was  $52.8^{\circ}$  at Campbell, and the lowest monthly mean was  $39.2^{\circ}$  at Memphis. The highest recorded was  $89^{\circ}$  at Unionville on the 22d, and the lowest was  $4^{\circ}$  below zero at Edgerton on the 1st. The greatest daily range was  $59^{\circ}$  at Unionville on the 19th.

## PRECIPITATION

The average for the State, 145 stations reporting, was 3.08 inches, or 0.18 inch below normal. The greatest local monthly amount was 6.04 inches at Wappapello Dam, and the least local monthly amount was 1.11 inches at Kansas City University. The greatest amount in any twenty-four hours was 4.55 inches at Wappapello Dam on the 5th. The average number of days with 0.01 inch or more was 8.

The snowfall averaged 0.2 inch, or 2.8 inches less than normal. The greatest monthly snowfall was 5.0 inches at Lucerne.

## MISCELLANEOUS PHENOMENA

Duststorms.—11th, 12th, 13th, 14th, 19th. Heavy deposit of red mud on 12th from dust precipitated with rain.

Floods.—In Black River 5th to 8th. In Grand River 12th to 17th. In Meramec River 11th to 14th. In Mississippi River from Keokuk, Ia., to Alton, Ill., 12th to 20th; near Cairo, Ill., and below continued from February to March 29th. In St. Francis River 1st to 17th.

Fog.—Dense, 4th, 5th, 10th, 11th, 13th, 26th, 29th.

Frost.—Light, 1st, 8th, 9th, 14th, 21st, 31st; heavy, 3d, 7th, 12th, 13th, 21st; killing, 1st, 2d, 7th, 12th, 13th, 15th, 16th, 17th, 18th, 31st.

Hail.—Light, 4th at Koshkonong; 9th at Fayette and Rolla; 10th at Columbia, Versailles, Warrensburg; 11th at Amity, Boonville, Centralia, Clifton Hill, Harrisonville, Kansas City, Lawson, Linneus, St. Joseph, St. Louis, Trenton; 26th at St. Louis University. Moderate, 9th at Columbia; 11th at Fulton; 12th at Maryville. Heavy, 11th at Brunswick and Lexington.

Halos.—Solar, 1st, 3d, 7th, 9th, 15th, 24th, 25th, 27th, 28th, 31st; lunar, 1st, 2d, 8th, 27th, 31st.

Sleet.—5th, 9th, 12th, 28th, 29th, 30th.

Thunderstorms.—Local, 4th, 5th, 9th, 19th, 20th, 23d, 24th, 25th, 26th, 28th, 31st; more or less general, 10th, 11th, 12th.

Windstorms.—A local windstorm occurred on the 11th, damaging farm homes and wrecking outbuildings on the two-mile prairie, about nine miles northeast of Columbia.

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind				Relative humidity			Percentage of sunshing
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12 noon	6:30 p. m.	
Columbia.....	30.07	30.53	18	29.38	11	9.3	25	sw.	19	76	53	55	59
Kansas City.....	30.05	30.54	1	29.25	11	10.4	34	nw.	14	76	55	54	61
St. Joseph.....	30.06	30.53	1	29.37	11	9.4	31	nw.	14	75	54	59	61
St. Louis.....	30.06	30.51	18	29.34	12	12.6	33	sw.	14	74	52	52	65
Springfield.....	30.06	30.48	18	29.33	11	9.4	27	w.	5	74	53	52	67
Cairo, Ill.....	30.08	30.49	18	29.32	12	10.1	32	sw.	11	75	54	57	66
Keokuk, Iowa..	30.06	30.54	18	29.50	11	9.2	29	nw.	15	75	56	61	63

## COMPARATIVE DATA FOR MARCH

Year	Temperature			Precipitation					Number of days				
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy	
1888.....	38.5	90	1	3.90	4.13	4.37	3.19	....	10	..	..	..	..
1889.....	44.3	84	18	2.22	1.26	3.37	2.02	....	5	..	..	..	..
1890.....	37.3	79	-11	3.51	2.00	2.40	6.12	5.7	8	..	..	..	..
1891.....	36.6	74	-11	2.66	3.03	2.26	2.68	7.1	10	..	..	..	..
1892.....	38.9	87	5	2.98	8.31	3.46	2.18	....	8	8	10	13	..
1893.....	40.5	86	0	2.92	2.49	2.71	3.57	3.2	7	11	10	10	..
1894.....	47.7	89	2	3.22	2.29	2.95	4.43	0.2	6	15	9	7	..
1895.....	42.4	98	0	2.36	1.49	2.39	3.21	4.4	9	14	7	10	..
1896.....	39.2	82	-2	2.22	1.15	2.04	3.47	5.2	8	11	9	11	..
1897.....	44.2	82	-5	6.73	4.38	5.62	10.18	1.0	12	9	9	13	..
1898.....	44.7	83	-9	7.44	5.26	6.42	10.63	0.6	11	11	7	13	..
1899.....	37.4	78	-8	2.92	3.19	2.34	3.23	8.9	10	9	11	11	..
1900.....	40.4	88	-4	1.52	1.43	1.35	1.79	0.2	6	16	9	7	..
1901.....	42.7	85	-1	3.77	3.33	4.21	3.77	1.8	8	11	8	12	..
1902.....	45.3	85	1	3.71	2.50	4.64	3.99	0.8	9	10	10	11	..
1903.....	46.8	81	9	3.62	2.34	4.17	4.34	1.1	8	13	7	11	..
1904.....	44.8	87	8	4.55	3.54	3.13	6.98	1.2	9	11	9	11	..
1905.....	50.3	88	10	3.15	2.27	3.36	3.82	T.	8	11	8	12	..
1906.....	34.6	75	-5	3.98	2.63	3.12	6.18	8.6	11	6	7	18	..
1907.....	53.9	95	16	2.76	2.54	3.05	2.70	1.0	7	14	7	10	..
1908.....	50.1	89	14	2.98	1.38	3.33	4.22	1.0	7	14	7	10	..
1909.....	44.5	81	9	3.03	2.24	2.01	4.83	0.6	6	13	9	9	..
1910.....	55.8	96	15	0.77	0.26	1.00	1.05	0.1	2	20	7	4	..
1911.....	46.8	91	5	1.72	1.71	1.84	1.62	1.4	6	16	8	7	..
1912.....	35.2	89	-4	4.69	3.69	5.25	5.12	16.5	11	12	6	13	..
1913.....	40.6	84	-12	4.64	3.44	4.52	5.95	5.0	9	12	8	11	..
1914.....	43.2	87	-2	2.76	2.80	2.89	2.59	4.7	8	13	7	11	..
1915.....	36.4	70	-6	1.45	1.20	2.01	1.16	7.9	6	7	8	16	..
1916.....	47.0	95	-2	2.55	2.48	3.20	1.98	3.1	7	14	8	9	..
1917.....	45.2	86	-7	2.69	2.70	2.80	2.57	1.5	7	15	7	9	..
1918.....	50.9	95	8	1.02	0.46	1.55	1.06	0.1	4	18	6	7	..
1919.....	46.3	90	-2	2.40	2.27	1.44	3.49	0.7	6	15	8	8	..
1920.....	44.6	86	-6	5.12	4.60	5.37	5.40	1.4	8	15	6	10	..
1921.....	51.9	90	11	5.06	3.52	5.32	6.34	0.5	10	13	9	9	..
1922.....	45.6	80	3	6.39	4.89	6.78	7.51	2.2	12	11	6	14	..
1923.....	40.4	83	-11	4.23	3.53	3.64	5.52	2.3	8	14	6	11	..
1924.....	38.4	80	8	2.54	2.52	2.40	2.71	9.4	8	8	8	15	..
1925.....	47.7	86	-5	1.94	1.77	1.98	2.07	0.8	5	17	8	6	..
1926.....	39.6	83	8	2.87	2.15	2.82	3.63	7.0	8	13	6	12	..
1927.....	45.9	80	0	5.93	4.08	6.88	6.83	3.7	11	12	8	11	..
1928.....	46.3	89	10	1.61	1.00	1.58	2.24	2.4	5	15	9	7	..
1929.....	48.6	97	11	3.33	2.99	3.13	3.88	T.	8	12	8	11	..
1930.....	43.2	80	6	1.38	1.19	0.91	2.04	1.4	4	18	6	7	..
1931.....	39.5	70	10	3.18	2.57	3.05	3.91	8.8	8	11	7	18	..
1932.....	38.3	81	-2	1.99	1.39	1.62	2.96	2.8	7	12	9	10	..
1933.....	44.1	87	5	3.61	3.05	2.79	4.99	2.0	10	11	8	12	..
1934.....	41.2	82	-3	2.55	1.53	2.10	4.03	4.9	7	13	8	10	..
1935.....	50.4	87	8	5.76	2.46	5.10	9.73	0.7	9	10	10	11	..
1936.....	49.4	84	13	1.27	0.82	1.00	1.98	T.	5	16	9	6	..
1937.....	40.4	77	6	1.66	1.27	2.15	1.56	2.8	6	12	8	11	..
1938.....	53.6	90	14	4.98	3.73	4.42	6.79	T.	12	13	7	11	..
1939.....	47.1	89	-4	3.08	3.33	2.20	3.70	0.2	8	15	7	9	..
Period.....	44.0	98	-12	3.26	2.53	3.16	4.08	8.0	8	13	8	10	..



## Climatological Data for March 1939

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches				Number of days				Prevailing direction of wind	Observers		
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Length of record, years	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelted	With precip., .01 inch or more	Clear			Partly cloudy	Cloudy
Northern Division																					
Bethany	Harrison	916	44	41.3	+ 1.0	85	23	0	1	47	46	2.32	+0.09	0.88	T. 1	7	19	6	6	ne.	A. S. Cumming
Brunswick	Chariton	652	58	44.0	+ 2.1	85	23	12	2	51	60	3.27	+0.57	1.20	0	7	18	4	9	ne.	O. K. Benecke
Canton, Lock & Dam 20	Lewis	488	1	43.7	.....	81	23†	15	1†	43	9	4.31	+1.97	1.90	T. 1	7	15	7	9	w.	Lockmaster
Chillicothe	Livingston	779	30	43.0	+ 1.3	85	23	6	1	50	33	3.97	+1.49	1.90	0	8	20	3	8	nw.	Wm. J. Olenhouse
Clifton Hill	Randolph	731	40	45.0	+ 2.8	79	22	12	1	40	30	3.78	+1.04	1.82	T. 1	8	16	4	11	sw.	Dr. A. J. Bradsher
Columbia	Boone	740	49	46.4	+ 3.5	83	23	18	1	40	49	2.66	-0.28	1.25	T. 1	8	11	9	11	s.	U. S. Weather Bureau
Conception	Nodaway	980	50	41.4	+ 1.6	82	22†	5	1	44	55	2.69	+1.04	1.10	T. 1	8	11	6	14	ne.	Fr. Adelhelm Hess
Edgerton	Platte	856	19	43.0 <sup>b</sup>	- 0.2	85	23	-	1	46	28	3.00	+0.74	2.22	0.2	7	20	3	8	s.	Fred L. Stiff
Elsberry	Lincoln	449	8	46.2 <sup>a</sup>	.....	85	23	19	17	48	8	2.59	.....	1.28	0	7	15	9	7	nw.	Ray E. Mills
Fayette	Howard	760	59	47.0	+ 5.1	83	23	15	1	43	56	2.07	-0.75	0.82	0	6	15	6	10	w.	Morrison Observatory
Fulton	Callaway	818	51	45.2	+ 1.1	83	23	16	1	46	47	3.02	+0.06	0.90	0	7	16	6	9	w.	Clyde C. Herring
Grant City	Worth	1,134	35	40.9	- 0.4	82	22†	-	1	42	47	3.21	+1.20	1.38	1.0	9	11	6	14	sw.	Howard Rybolt
Hannibal	Marion	759	47	44.8	+ 3.8	80	23	14	1†	47	55	3.66	+1.06	2.26	0	8	14	7	10	se.	Hannibal Water Dept.
Kansas City Airport	Jackson	741	50	45.9	+ 3.2	83	23	12	1	42	50	1.14	-1.39	0.63	0.3	10	11	7	13	sw.	U. S. Weather Bureau
Kansas City Univ.	Jackson	908	1	47.8	.....	85	23	16	1	41	1	1.11	.....	0.25	T. 1	8	13	7	11	s.	University of Kansas City
Kidder	Caldwell	1,020	47	43.2	+ 2.4	85	23	5	1	42	51	5.05	+2.86	2.84	0.2	8	18	2	11	sw.	Mrs. Geraldine Terry
King City	Gentry	1,095	.....	.....	.....	.....	.....	.....	.....	.....	13	2.75	+0.69	1.55	T. 1	7	8	11	12	sw.	John M. Martin
Kirksville	Adair	969	50	42.4	+ 2.7	82	23	3	1	43	57	4.24	+1.30	2.38	0	6	10	14	7	nw.	Charles Noble
Lawson	Ray	1,070	1	44.4	.....	83	23	7	1	38	1	3.80	.....	2.64	2.0	7	12	7	7	sw.	Elmer E. Lamb
Linneus	Linn	816	.....	.....	.....	.....	.....	.....	.....	.....	7	3.07	.....	1.02	T. 1	7	15	9	7	sw.	H. D. Taggart
Louisiana	Pike	469	45	45.2	+ 1.7	85	25	17	1	46	58	2.74	-0.73	1.37	0	6	21	4	6	w.	Stark Bro's Nurseries
Macon	Macon	875	40	42.0	- 0.2	84	23	9	1	53	46	4.55	+1.71	1.80	T. 1	9	14	6	11	w.	Mrs. W. C. Brown
Maryville	Nodaway	1,169	49	40.9	+ 3.0	84	23	2	1	42	45	2.34	+0.47	0.67	2.5	10	13	4	14	sw.	R. B. Montgomery
Memphis	Scotland	787	0	39.2	.....	83	23	9	1†	55	9	5.09	+2.73	2.10	T. 1	7	13	6	12	sw.	John W. Alexander
Mexico	Audrain	800	50	43.9	+ 1.9	85	23	9	18	39	2	4.26	+0.25	0.87	T. 1	7	.....	.....	.....	nw.	Mrs. Abbie Snoddy
Moberly	Randolph	875	2	44.4	.....	82	23	9	18	39	2	4.26	.....	2.73	0	6	19	3	9	sw.	McCormick Hospital
Oregon	Holt	1,048	83	43.6	+ 4.0	84	23	8	1	38	83	1.70	-0.26	1.00	1.0	7	14	9	8	nw.	Miss Mina Wright
St. Charles	St. Charles	520	51	47.4 <sup>a</sup>	+ 2.9	87	23	21	1†	44	61	1.74	-1.43	0.74	0.1	5	20 <sup>a</sup>	4 <sup>a</sup>	6 <sup>a</sup>	s.	Martin L. Comann
St. Joseph	Buchanan	957	29	43.8	+ 3.3	84	23	8	1	40	67	4.69	+2.21	2.82	T. 1	9	14	8	9	s.	U. S. Weather Bureau
Steffenville	Lewis	650	41	44.1	+ 1.9	83	23	12	1	43	46	4.49	+1.48	1.62	0	6	16	9	6	s.	Frank Hall
Tarkio	Atchison	916	36	40.6	+ 0.5	85	23	-	1	58	45	3.28	+1.61	2.01	4.0	7	8	15	8	sw.	Albert Volker
Trenton	Grundy	822	43	43.3	+ 2.2	83	23	6	1	44	44	2.45	0.00	1.07	2.0	10	14	11	6	s.	W. H. Estes
Unionville	Putnam	1,062	46	40.8	+ 1.9	89	22	4	1†	59	46	4.27	+1.77	2.82	0.5	4	22	3	6	uw.	John H. Schick
Warrenton	Warren	816	57	48.1	+ 5.6	83	23	17	1†	47	49	3.30	+0.12	1.62	T. 1	8	14	8	9	sw.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.	574	67	42.4	+ 3.5	83	23	14	1	42	67	3.69	+1.31	2.26	T. 1	10	14	5	12	sw.	U. S. Weather Bureau
Division means and extremes		.....	.....	43.8	+ 2.3	89	22	- 4	1	59	.....	3.33	+0.80	2.96	0.4	8	15	7	9	sw.	.....
Southwestern Division																					
Appleton City	St. Clair	813	44	47.1	+ 2.0	81	23	16	1	45	47	1.61	-1.54	1.00	T. 1	9	16	3	12	sw.	Rolla Brown
Bolivar	Polk	1,071	36	49.2	+ 2.9	79	22†	18	1	38	44	2.76	-0.67	1.65	T. 1	9	12	9	10	s.	Southwest Baptist College
Boonville	Cooper	650	1	44.8	.....	83	23	16	1	44	62	2.65	-0.39	1.01	0	8	19	2	10	se.	Boonville Water Dept.
Clinton	Henry	765	46	47.8	+ 2.8	84	23	17	1	43	52	2.33	-1.03	0.75	T. 1	9	.....	.....	.....	.....	U. S. Weather Bureau
Dean †	McDonald	1,000	35	51.6	+ 2.8	80	22	18	1	48	40	1.51	-2.19	0.66	T. 1	5	14	9	8	w.	E. S. Taylor
Eldon	Miller	934	44	45.6	+ 2.0	83	23	17	1†	49	40	2.85	-0.19	0.53	0	9	11	11	9	sw.	E. H. Shepperd
Garber	Taney	950	5	50.4	.....	84	23	19	1†	50	5	2.07	.....	0.85	T. 1	8	9	8	14	sw.	William H. Durham
Harrisonville	Cass	904	61	44.2	+ 2.9	84	23	8	1	51	64	2.51	-0.29	1.33	0	8	10	7	14	sw.	John H. Patterson
Jefferson City	Cole	557	49	44.8	+ 1.2	84	23	16	1	47	57	1.66	-1.40	0.75	0	9	13	10	8	w.	Mrs. Frank Kliegel
Lakeside	Miller	595	8	46.2	.....	81	23	20	1	47	8	2.50	.....	0.83	.....	8	.....	.....	.....	.....	W. S. Frame
Lamar	Barton	980	51	48.2	+ 2.2	81	22†	19	1	49	58	1.72	-1.47	1.00	T. 1	8	13	4	11	sw.	Jesse A. Mann
Lebanon	Laclede	1,265	51	48.4	+ 3.4	80	23	16	1	40	52	3.39	-0.09	1.58	0	8	13	4	14	s.	Mrs. Rosa E. Montellus
Lexington	Lafayette	688	54	45.7	+ 2.3	85	23	12	1	47	55	2.44	-0.34	1.20	0	9	18	6	7	ne.	Miss Carrie Loomis
Lockwood	Dade	1,078	33	49.6	+ 2.3	80	22	19	1	38	43	1.58	-1.98	0.73	2.0	8	15	9	7	sw.	Hubert A. Nieman
Marshall	Saline	779	52	47.4	+ 4.4	83	23	13	1	40	49	3.11	+0.19	1.14	0	7	18	6	7	sw.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	38	50.0	+ 4.6	81	23	19	1	37	42	2.35	-1.52	0.73	T. 1	10	12	14	5	se.	Mo. Fruit Exp. Station
Mount Vernon	Lawrence	1,174	27	50.2	+ 4.3	80	14†	20	1	40	39	1.97	-1.92	0.60	2.0	5	15	10	6	sw.	G. H. Boswell
Neosho	Newton	1,011	52	52.0	+ 3.9	81	22	21	1†	49	56	1.98	-1.57	0.70	T. 1	6	12	10	6	sw.	U. S. Fisheries Station
Nevada	Vernon	862	46	50.6 <sup>a</sup>	+ 5.7	84	23	20	1	47	47	2.61	-0.26	1.23	0	8	12	9 <sup>a</sup>	9 <sup>a</sup>	sw.	T. J. Kaupp
Sedalia	Pettis	910	26	49.2	+ 6.4	86	23	13	1	40	28	2.51	-0.32	1.05	0	8	16	6	9	sw.	Dr. J. E. Cannaday
Sellman	Barry	1,542	38	51.3 <sup>a</sup>	+ 4.7	79	23	21	1†	48	36	1.85	-1.75	0.73	0	8	17 <sup>a</sup>	7 <sup>a</sup>	6 <sup>a</sup>	s.	Floyd E. Fawver
Seymour (near)	Webster	1,642	33	47.6	+ 2.2	77	22†	12	1	42	33	1.41	-2.25	0.39	T. 1	8	13	8	10	s.	A. L. Hailey
Springfield	Greene	1,301	51	49.0	+ 3.8	79	22	21	1	37	51	1.78	-1.61	0.65	1.7	11	14	8	9	s.	U. S. Weather Bureau
Versailles	Morgan	1,037	12	48.8	+ 3.8	84	23	14	1	41	15	2.39	+0.08	0.69	T. 1	9	15	4	12	sw.	J. M. Wilson
Warrensburg	Johnson	878	52	47.6	+ 3.6	84	23	13	1	40	59	1.97	-1.12	0.54	T. 1	9	16	6	9	sw.	E. A. Markey
Warsaw	Benton	687	38																		



## Day of month

Continued on next page



## Daily Precipitation for March 1939—Continued from preceding page

Stations	Drainage-basins	Day of month																															Total								
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31									
Southeastern Division—		Concluded																																							
Bragg City <sup>2</sup>	St. Francis				T.	1.78					.37	T.									T.	.05		T.	.04	.35									2.28						
Campbell	do				.59	1.08					.58		.81														.35	.09	T.	.57				3.06							
Cape Girardeau <sup>2</sup>	Mississippi				.06	3.32					.82	.02	.24															T.	.20	.27	T.			4.93							
Caruthersville <sup>2</sup>	do				.10	1.61					.22		.40																.53		.71	.01		3.56							
Centerville <sup>2</sup>	Black				.17	.75					.12	.51	.35									T.								.52				4.25							
Crystal City <sup>2</sup>	Mississippi					.71					.22		.76															.25		.04	.01			1.99							
Cuba <sup>2</sup>	Meramec				.04	2.88					1.45	.26	.45																		.24			2.85							
Dexter <sup>2</sup>	St. Francis				.82	1.92					.43	T.	.28									T.	.05							.42	.20			4.27							
Doniphan	Black				.75	1.14					1.54	.57										T.								.06	.02	.61	.05	5.24							
Farmington	St. Francis				.02	2.89					.27	.09	.35																	.19		.31		.02	4.59						
Fisk <sup>2</sup>	do				.02	2.26					1.34	.05	.35										.04		T.						.24	.06		4.30							
Fredericktown <sup>2</sup>	do																																		2.97						
Goodland	Black				.30	.68					.10	.02	.55																			.30		.02	2.97						
Greenville	St. Francis				1.06	1.11					.84																						1.05		4.06						
Jackson	Mississippi				.85	2.25					1.15		.43																	.05	.25			1.05	5.41						
Jerome <sup>2</sup>	Gasconade				.37						1.26		.30																			.16		.15	2.24						
Koshkonong	Black				2.20	.47					.51		.19																						4.10						
Leeper <sup>2</sup>	do				T.	2.00					.45	.31	.30																				.06	.48	.02	3.61					
Licking (near)	Gasconade				.17	.30					.06	.98	.10	.31																				.05	2.07						
Marble Hill	Mississippi				.70	1.95					.85		.20																				.30		.50	4.50					
Meramec Park <sup>2</sup>	Meramec				.40						.53	.03	1.03																		.15		.17	.04	2.35						
Morehouse	Mississippi				1.11	1.78					.42		.69																			.47		.19		4.84					
New Madrid <sup>2</sup>	do				.04	1.88	T.				.28	T.	.31																			.26	T.	.79	.06	3.68					
Owensville <sup>2</sup>	Gasconade										1.07		.120																							2.27					
Pacific <sup>2</sup>	Meramec										.85	.70	T.																							1.85					
Parma <sup>2</sup>	St. Francis					2.05					.88																						.19		.32	2.94					
Poplar Bluff <sup>2</sup>	Black				.05	2.93					.33		.33																				.08		.46	4.23					
Richwoods <sup>2</sup>	Meramec					.60					.58		1.22																					.10	.60		3.25				
Rolla	do				.04	.28					.12	.15	.02	.28																							2.10				
St. Louis <sup>2</sup>	Mississippi				.07	.23					T.	.06	1.78	.11																				.40	.37	T.	.13	T.	.15	3.35	
St. Louis Airport <sup>2</sup>	Missouri				.04	.06					T.	.08	.88	T.																				.26	.01	T.	.17	T.	.12	1.63	
St. Louis University <sup>2</sup>	Mississippi				.05	.18					.07	1.40	.11																						1.12	.22	.01	.15		.10	3.46
Salem <sup>2</sup>	Meramec				.48						2.15	.04	.72																									3.54			
Stikeston <sup>2</sup>	Mississippi				.05	3.10					.20	.25		.55																				.06		.38		5.19			
Union	Meramec				T.	.24					.15	.47	.61																				.79	.05	.03	.14		T.	2.48		
Valley Park <sup>2</sup>	do				.22						.05	.22	.83																				.20	.40		.07	.08	2.17			
Van Buren	Black				.20						.33		.23																					.09		.26		2.91			
Wappapello Dam <sup>2</sup>	St. Francis				.02	4.55					.38	.17	.30																					.15	.46	.01	6.04				
Washington Univ. <sup>2</sup>	Mississippi					.21					.08	.85	1.22																					.25	.82		.05	.09	3.59		
West Plains	Black				1.85	.64					.44	T.	.17																						T.	.74	.12	.23	T.	2.96	
Williamsville <sup>2</sup>	do				.05	3.32					.26	.16	.25																						.06		.63	.02	4.75		
Willow Sprgs. (near) <sup>2</sup>	White				T.	1.11					.30	.41	.49																						.57			2.94			
Zalma (near) <sup>2</sup>	Mississippi				.06	4.17					.55	.06	.24																					.05		.61		5.74			
Calro, Ill. <sup>1</sup>	do				2.87	.33					T.	.63	.26	.24																				.04	.02	T.	.22	.01	.15	4.78	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation.

<sup>1</sup> First-order Weather Bureau station; precipitation is for the 24-hour period, midnight to midnight, unless otherwise indicated. <sup>2</sup> Precipitation is measured in the morning; amount then recorded is for the preceding 24 hours. <sup>3</sup> Precipitation is for 24-hour period, midnight to midnight. <sup>4</sup> Precipitation measured with recording gage. <sup>5</sup> Included in next measurement. <sup>6</sup> Trace, or precipitation less than 0.01 inch. <sup>7</sup> Estimated. <sup>8</sup> Partially estimated. <sup>9</sup> Incomplete.

NOTE:—In addition to the stations shown on daily temperature page, records of daily temperatures are kept at the following stations in Missouri: Advance, Appleton City, Bethany, Bolivar, Boonville, Campbell, Canton Lock No. 20, Clifton Hill, Columbia Airport, Conception, Dean, Edgerton, Elsberry, Fulton, Goodland, Greenville, Kansas City University, Kidder, Kirksville Airport, Koshkonong, Lakeside, Licking (near), Lockwood, Marble Hill, Memphis, Mount Vernon, St. Joseph Airport, St. Louis Airport, St. Louis University, Saverton Lock No. 22, Seligman, Seymour (near), Springfield Airport, Steffenville, Tarkio, Versailles, Wappapello Dam, Warsaw, and Washington University.

## Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for March 1939

(See precipitation data in daily precipitation table)

Station	Data	Day of month																															Monthly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Columbia .....	{ Evaporation .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	{ Mean temperature .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	{ Wind movement ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lakeside .....	{ Evaporation .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	{ Mean temperature .....	29	36	42	42	46	40	41	50	40	50	56	42	48	50	34	34	28	37	51	55	52	58	62	59	60	59	54	40	40	44	50	46.2
	{ Wind movement ..	112	28	31	74	39	120	50	40	88	65	51	100	38	68	130	100	73	42	15	91	45	27	31	29	17	42	45	61	69	64	55	1,840
St. Louis .....	{ Evaporation .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	{ Mean temperature .....	30	35	42	44	53	37	42	52	42	48	55	40	46	52	35	34	30	32	50	50	54	61	68	70	70	65	50	40	40	42	51	47.1
	{ Wind movement ..	52	52	40	72	28	57	34	23	64	55	43	79	68	38	110	64	61	38	46	72	70	32	16	17	15	59	90	115	104	27	47	1,688



Daily Temperatures for March 1939

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
Northern Division																																		
Brunswick §§	Maximum	34	48	56	51	44	46	59	66	51	63	59	49	65	77	42	43	37	45	75	62	77	83	85	72	79	64	55	44	48	39	64	57.5	
	Minimum	14	12	21	33	36	22	22	28	29	29	42	35	30	30	19	19	19	19	24	39	35	34	41	48	50	50	38	33	33	32	32	30.6	
Chillicothe §§	Maximum	35	44	52	47	37	44	60	64	50	53	52	50	65	71	38	40	36	47	76	62	76	83	85	74	78	59	52	44	36	48	63	55.5	
	Minimum	6	12	24	32	33	20	22	29	26	29	41	32	29	39	17	18	16	20	26	34	36	42	46	50	49	56	34	33	32	30	31	30.4	
Columbia	Maximum	36	49	57	51	45	45	60	70	52	60	61	43	65	73	39	41	35	45	73	61	74	81	83	75	78	67	56	45	40	46	64	57.1	
	Minimum	13	25	35	43	35	24	31	40	32	41	43	33	29	33	21	21	20	26	34	40	41	45	54	54	57	51	41	33	85	34	41	35.8	
Fayette	Maximum	36	49	56	50	47	45	59	68	66	59	61	54	65	72	53	41	39	45	73	70	75	82	83	75	79	66	65	47	41	47	62	59.0	
	Minimum	15	21	31	40	36	22	27	37	30	40	54	35	25	44	20	22	19	25	33	37	32	49	50	53	53	56	39	32	34	33	38	34.9	
Grant City	Maximum	31	38	44	43	35	42	47	53	42	45	43	49	64	64	35	38	35	45	74	65	77	82	82	75	75	65	53	45	37	51	65	52.9	
	Minimum	1	10	26	26	28	13	18	35	24	33	37	32	29	44	17	10	17	17	34	31	35	47	40	45	53	52	31	32	30	29	39	28.9	
Hannibal	Maximum	31	45	53	50	48	40	49	67	61	50	55	49	61	72	66	35	35	36	71	65	73	76	80	74	76	65	58	45	43	38	62	55.8	
	Minimum	14	20	33	42	36	23	30	28	37	47	47	32	29	44	19	18	14	19	33	35	37	46	54	59	55	54	35	30	32	32	34	33.7	
Kansas City Airport	Maximum	36	45	57	47	40	49	61	67	47	65	63	51	70	69	40	41	33	54	76	62	77	81	83	70	72	62	55	45	39	56	61	57.2	
	Minimum	12	25	35	34	28	24	29	35	30	43	38	31	27	19	24	22	27	45	39	35	46	48	52	60	47	37	34	35	34	44	34.6		
Kirksville	Maximum	33	41	50	46	39	40	43	61	55	47	48	49	60	70	54	37	32	41	71	71	74	81	82	75	77	65	53	48	41	40	65	54.6	
	Minimum	3	10	32	35	32	20	20	31	27	35	39	33	26	42	15	13	16	28	34	31	38	47	50	48	53	32	29	31	31	33	30.1		
Lawson	Maximum	33	40	50	47	38	45	59	65	53	59	59	48	65	69	37	39	35	47	75	61	75	80	83	70	74	62	52	44	38	53	62	55.4	
	Minimum	7	17	30	31	33	20	29	39	26	40	46	32	34	35	17	20	19	23	37	35	38	46	53	53	54	50	33	33	32	33	40	33.4	
Louisiana	Maximum	37	47	55	50	42	42	50	70	50	55	55	50	55	72	45	40	40	50	76	60	74	80	80	74	80	85	75	55	50	40	40	60	56.8
	Minimum	17	18	30	40	33	24	25	32	32	39	50	33	25	38	22	20	18	23	34	38	28	40	48	60	57	52	40	30	33	33	33	33.7	
Macon §§	Maximum	33	43	54	51	40	43	53	65	48	56	57	44	62	72	37	41	34	45	72	59	75	82	84	75	79	61	51	45	43	42	65	55.0	
	Minimum	9	10	24	32	32	19	20	28	28	28	33	32	28	30	16	13	14	19	33	35	39	51	53	53	54	53	33	29	30	31	32	28.9	
Maryville	Maximum	31	39	44	42	34	42	48	55	42	44	43	47	61	34	37	34	41	72	67	76	81	84	73	73	64	51	47	36	53	60	52	33.3	
	Minimum	2	13	24	26	31	14	20	35	24	34	36	32	31	31	14	17	13	18	35	31	34	43	47	46	52	51	31	32	31	28	38	29.5	
Mexico §§	Maximum	35	48	59	52	47	45	50	70	50	66	60	41	65	74	42	36	43	73	60	75	84	85	79	80	69	53	45	45	43	67	57.3		
	Minimum	9	10	24	32	32	22	28	30	39	33	28	32	20	19	17	18	24	31	34	40	43	50	54	55	58	30	32	32	32	33	30.5		
Moberly	Maximum	29	45	54	48	45	41	54	64	60	57	57	50	59	71	53	36	36	44	70	70	72	79	82	76	76	69	55	49	39	42	62	56.3	
	Minimum	12	12	32	41	33	21	25	34	30	31	37	33	28	45	28	21	12	9	34	34	49	52	54	52	54	36	30	32	32	36	32.6		
Oregon	Maximum	33	40	50	45	36	46	59	59	44	46	44	50	69	62	37	39	37	50	76	67	78	83	84	72	73	73	51	47	37	58	63	55.1	
	Minimum	8	20	25	28	32	17	26	39	25	37	37	32	35	32	16	20	19	20	39	30	40	50	52	52	52	49	31	32	31	30	40	32.1	
St. Charles §§	Maximum	41	43	59	54	54	42	57	...	71	61	68	49	60	70	44	42	40	44	74	62	71	86	87	84	82	69	56	47	45	42	67	59.0	
	Minimum	21	22	32	39	43	28	27	38	...	34	40	38	29	39	26	24	21	25	30	39	35	44	48	54	59	57	43	32	38	35	34	35.8	
St. Joseph	Maximum	32	40	48	42	36	46	60	60	46	49	48	49	69	64	37	38	34	50	75	62	77	82	84	68	74	61	53	42	37	56	62	54.2	
	Minimum	8	22	35	31	23	20	30	33	28	39	38	33	36	24	17	22	20	24	41	35	42	54	50	55	55	41	34	33	32	32	45	33.3	
Trenton	Maximum	30	41	49	45	39	41	54	61	58	54	49	46	61	67	39	38	36	45	76	65	75	82	83	76	77	68	58	48	42	48	64	55.3	
	Minimum	6	15	30	32	30	19	25	34	27	38	39	32	28	36	17	20	13	20	32	32	35	49	50	52	50	45	32	35	32	29	36	31.3	
Unionville §§	Maximum	35	44	50	45	38	43	48	65	47	49	45	48	62	72	37	42	36	45	75	60	78	89	85	78	82	67	51	43	38	41	68	55.0	
	Minimum	4	4	18	29	30	20	19	25	25	36	32	28	29	14	15	11	13	16	30	31	32	42	48	48	52	31	30	30	30	30	26.5		
Warrenton	Maximum	36	47	57	55	54	53	59	69	68	60	65	65	63	71	69	40	38	40	73	72	72	81	83	81	80	71	61	51	44	42	63	60.7	
	Minimum	17	22	31	40	42	24	27	35	31	39	53	35	31	43	22	20	17	23	30	40	35	40	58	59	55	56	40	31	35	34	34	35.5	
Keokuk, Iowa	Maximum	34	46	53	52	38	38	41	65	44	48	48	41	59	71	34	35	30	35	71	53	74	81	83	79	77	63	48	42	37	39	64	52.4	
	Minimum	14	24	36	36	30	21	21	35	29	35	36	33	31	31	18	19	14	18	29	36	36	47	54	58									







YMS  
434

# CLIMATOLOGICAL DATA

19

## MISSOURI SECTION

W. J. MOXOM  
ST. LOUIS, MO.

VOL. XLIII

APRIL 1939

No. 4

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### GENERAL SUMMARY

April was characterized by comparatively low temperature, and frequent, well distributed and generous amounts of precipitation. A rather severe cold spell occurred during the first half of month with minimum temperatures in the low twenties general throughout the State and below 20° at several stations. The monthly totals of precipitation were well above the normal in all sections and more than two inches above normal in the southeast portion. Most of the precipitation occurred during the first twenty-one days of month and ground preparation was delayed quite generally until the last week of the month when favorable conditions prevailed and rapid progress was made in ground preparation and planting.

The close of the month found corn planting moving forward rapidly. Winter wheat was in good to excellent condition with fully fifty per cent jointed and in some sections beginning to head. Oats were doing nicely with condition fair to good. Pastures and ranges were improving and truck crops and vegetables were making good growth.

The extremely low temperatures during the early part of month resulted in only slight damage to fruit and the outlook at close of month for a near normal crop appeared to be good.

### TEMPERATURE

The monthly mean for the State, 83 stations reporting, was 53.4°, or 1.8° below normal. The highest monthly mean was 58.0° at Campbell, and the lowest monthly mean was 49.0° at Memphis. The highest recorded was 88° at Oregon and Saverion on the 23d, St. Charles on the 24th, Sedalia on the 25th, and Nevada on the 26th, and the lowest was 16° at Goodland on the 7th. The greatest daily range was 52° at Garber on the 9th.

### PRECIPITATION

The average for the State, 144 stations reporting, was 5.01 inches, or 1.08 inches above normal. The greatest local monthly amount was 8.21 inches at Salem, and the least local monthly amount was 2.22 inches at Neosho. The greatest amount in any twenty-four hours was 4.67 inches at Kansas City Airport on the 15-16th. The average number of days with 0.01 inch or more was 10.

The snowfall averaged 0.1 inch, or 0.5 inch less than normal. The greatest monthly snowfall was 2.0 inches at King City, Maryville, and Tarkio.

### MISCELLANEOUS PHENOMENA

Duststorms.—Locally on 9th, 10th, 23d, 29th.  
Earthquake.—On 15th at New Madrid.  
Floods.—In Black River 17th to 20th. In Bourbeuse River 18th to 19th. In Gasconade River on 18th. In Grand River 16th to 18th. In Meramec River 7th to 8th and 17th to 21st. In the Mississippi River flood stage was reached at Hannibal on the 9th and at Keokuk, Iowa on the 10th and the flood moved downstream, and above-flood stages prevailed at the close of the month in the reach bordering the southern portion of the State. In the Missouri River, at Hermann and below, 17th to 21st. In St. Francis River 7th to 11th and 18th to 24th.

Fog.—Dense, 10th, 11th, 15th, 16th.  
Frost.—Light, 2d, 3d, 4th, 6th, 7th, 8th, 12th, 19th, 20th,

22d; heavy, 3d, 6th, 7th, 11th, 13th, 20th, 22d of killing, 6th, 7th, 8th, 11th, 12th, 13th, 19th, 21st.

Hail.—Light, 10th at Arcadia, Centerville, Neosho, Neosho, 14th at Bethany and Gorin; 15th at Kansas City Airport, Lockwood, Sedalia, near Crystalline, St. Louis Airport, West Plains, Bois D'Arc; 16th at Fayette and Richwoods; 17th at Sedalia and Centerville; 18th at West Plains; 20th at Amity; (Continued on page 21)

### PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind				Relative humidity			Percentage of sunshing
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12 noon	6:30 p. m.	
Columbia.....	29.96	30.53	12	29.45	10	9.2	26	sw.	17	77	53	50	48
Kan. C. Airport.	29.97	30.54	12	29.47	10	10.5	30	n.	5	75	50	47	59
St. Joseph.....	29.97	30.53	12	29.55	9	9.9	27	nw.	18	76	51	47	57
St. Louis.....	29.97	30.57	13	29.38	17	12.3	30	sw.	10	70	53	54	53
Springfield.....	29.98	30.50	12	29.45	10	10.1	27	sw.	17	76	50	52	59
Cairo, Ill.....	29.99	30.60	13	29.46	17	10.0	35	n.	6	76	54	52	61
Keokuk, Iowa..	29.96	30.54	13	29.41	17	9.0	24	sw.	17	78	54	56	50

### COMPARATIVE DATA FOR APRIL

Year	Temperature			Precipitation					Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy
1888.....	57.9	94	20	1.92	1.54	2.37	1.85	.....	5	..	..	..
1889.....	55.7	90	27	2.66	2.84	3.31	1.83	.....	8	..	..	..
1890.....	56.2	93	25	3.58	2.26	3.43	5.05	.....	8	..	..	..
1891.....	56.8	93	15	3.46	3.88	4.08	2.41	T.	9	..	..	..
1892.....	53.1	90	24	5.83	5.14	5.35	7.01	0.0	11	9	8	13
1893.....	53.9	95	19	8.27	6.37	9.14	9.29	0.0	12	8	9	13
1894.....	56.1	95	20	3.11	2.24	3.52	3.58	T.	8	12	10	8
1895.....	57.9	100	24	2.04	1.87	2.08	2.17	T.	7	14	8	8
1896.....	61.9	92	17	3.57	3.10	4.35	3.25	0.0	9	10	11	7
1897.....	54.4	88	21	4.65	4.07	3.78	6.10	T.	10	10	12	9
1898.....	52.5	90	14	3.64	3.77	3.75	3.40	T.	10	12	9	9
1899.....	54.0	96	6	3.80	3.46	4.02	3.93	3.8	8	12	9	9
1900.....	56.7	89	21	3.50	3.05	3.66	3.78	0.7	9	11	10	9
1901.....	53.3	94	24	2.96	2.63	2.83	3.41	1.8	8	14	7	9
1902.....	53.9	95	19	2.82	1.98	3.30	3.18	T.	11	13	11	6
1903.....	55.9	91	26	3.37	3.97	3.34	2.79	1.2	9	11	10	9
1904.....	49.0	84	19	5.63	6.14	6.07	4.67	2.7	9	15	6	8
1905.....	54.9	92	20	3.09	3.66	2.28	3.34	0.3	6	14	8	8
1906.....	59.5	93	22	2.42	2.67	2.40	2.18	0.0	6	17	7	6
1907.....	48.7	89	16	3.33	2.62	3.83	3.55	T.	8	11	8	11
1908.....	56.6	90	18	5.89	2.55	6.58	8.53	T.	11	11	8	11
1909.....	54.8	93	19	4.72	4.36	3.60	6.21	T.	8	13	9	8
1910.....	54.8	97	21	3.58	2.74	3.55	4.45	0.9	11	12	7	11
1911.....	53.5	91	20	4.93	4.28	4.70	5.81	T.	10	12	8	10
1912.....	56.0	89	24	6.08	3.78	6.47	8.00	0.7	10	13	7	10
1913.....	56.2	94	25	3.32	3.36	3.10	3.50	T.	7	16	5	9
1914.....	55.2	91	18	3.14	2.57	3.11	3.75	T.	8	12	7	11
1915.....	61.9	96	18	2.12	1.93	2.64	1.79	T.	7	16	8	6
1916.....	53.5	93	21	3.32	2.77	3.93	3.27	1.9	10	11	8	11
1917.....	53.2	89	19	5.95	5.66	5.08	7.11	1.2	12	12	6	12
1918.....	50.8	93	19	5.33	3.61	5.26	7.11	0.9	11	12	6	12
1919.....	55.3	94	20	3.03	3.15	3.46	2.47	T.	9	12	7	11
1920.....	50.2	89	4	3.82	4.86	3.30	3.31	4.8	11	11	7	12
1921.....	56.0	91	19	5.36	4.70	5.22	6.16	1.1	10	13	7	10
1922.....	57.3	91	24	6.41	4.96	8.47	5.81	T.	11	13	6	11
1923.....	54.2	92	14	3.26	2.52	3.38	3.89	0.4	8	14	8	8
1924.....	56.6	95	11	2.15	1.26	2.78	2.40	T.	6	14	8	8
1925.....	61.0	92	24	4.12	4.12	4.73	3.52	0.0	10	12	9	9
1926.....	49.9	91	11	2.42	2.39	2.17	2.69	2.4	8	14	6	10
1927.....	57.7	94	18	8.68	6.73	8.61	10.70	T.	14	10	7	13
1928.....	51.6	88	16	4.86	2.76	5.46	6.37	0.2	8	13	7	10
1929.....	57.4	96	27	6.15	6.32	6.58	5.56	0.0	12	11	8	11
1930.....	59.1	96	23	2.02	1.89	2.77	1.39	0.0	8	14	8	8
1931.....	54.8	90	22	2.96	2.92	2.77	3.18	T.	9	14	6	10
1932.....	57.6	95	22	2.58	2.43	2.52	2.78	0.0	8	14	8	8
1933.....	54.9	88	22	3.84	2.08	3.82	5.62	0.7	10	11	9	10
1934.....	56.5	90	24	2.50	2.06	2.61	2.84	T.	7	16	8	6
1935.....	52.3	90	23	2.90	3.10	3.02	2.59	0.7	9	9	7	14
1936.....	53.0	95	9	2.45	2.00	1.93	3.41	0.5	8	16	7	7
1937.....	54.5	93	21	4.04	3.25	3.67	5.21	T.	10	10	8	12
1938.....	56.7	89	18	3.65	3.79	4.13	3.13	3.2	10	13	9	8
1939.....	53.4	88	16	5.01	4.35	4.32	6.36	0.1	10	11	8	11
Period.....	55.2	100	4	3.93	3.39	4.05	4.34	0.6	9	12	8	10



## Climatological Data for April 1939

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.							Greatest daily range	Length of record, years	Precipitation, in inches				Number of days				Prevailing direction of wind	Observers
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Total			Departure from the normal	Greatest in 24 hours	Total snowfall, unmelted	With precip., of inch or more	Clear	Partly cloudy	Cloudy			
Northern Division																						
Bethany	Harrison	916	44	51.0	- 0.5	83	23†	20	12	38	46	3.39	+0.10	1.05	T.	8	14	9	7	nw.	A. S. Cumming	
Brunswick	Chariton	652	58	52.0	- 2.2	85	25	23	12†	43	60	3.66	-0.17	1.26	T.	15	14	3	13	n.	O. K. Benecke	
Canton, Lock & Dam 20	Lewis	488	1	50.6	.....	82	24†	23	12	35	9	4.64	+1.88	1.78	0	14	14	2	14	w.	Lockmaster	
Chillicothe	Livingston	779	30	51.7	- 0.3	84	24	21	12	37	33	3.47	+0.25	1.18	0	12	19	3	8	nw.	Win. J. Olenhouse	
Clifton Hill	Randolph	731	40	51.6	- 1.9	81	24†	22	12	35	30	3.37	+0.01	0.95	T.	11	11	7	12	sw.	Dr. A. J. Bradsher	
Columbia	Boone	740	49	53.2	- 1.6	84	25	23	12	32	49	4.52	+0.75	2.38	T.	11	7	8	15	s.	U. S. Weather Bureau	
Conception	Nodaway	980	50	52.1	- 0.1	83	23†	19	12	38	55	3.26	+0.53	1.18	1.2	9	9	10	10	nw.	Fr. Adelhelm Hess	
Edgerton	Platte	856	19	53.2	- 0.6	83	23†	20	12	42	28	4.44	+1.36	2.65	T.	9	10	4	15	n.	Fred L. Stiff	
Elsberry	Lincoln	449	8	51.9	.....	85	24	22	12	39	8	5.52	.....	1.42	0	11	10	10	10	nw.	Ray E. Mills	
Fayette	Howard	760	59	52.8	- 1.4	83	24†	22	12	36	56	3.25	-0.30	1.32	0	9	12	6	12	nw.	Morrison Observatory	
Fulton	Callaway	818	51	52.0	- 2.6	85	24†	21	12	41	47	6.53	+2.52	1.74	0	11	14	6	10	w.	Clyde C. Herring	
Grant City	Worth	1,134	35	52.2	- 0.0	86	24	17	12	37	47	2.80	-0.16	0.94	T.	8	14	8	14	sw.	Howard Rybolt	
Hannibal	Marion	759	47	50.8	- 2.6	83	24	21	12	31	55	4.48	+1.29	1.30	0	14	8	8	14	sw.	Hannibal Water Dept.	
Kansas City Airport	Jackson	741	50	53.9	- 0.9	85	23	27	12	33	50	7.04	+3.90	4.67	0.1	12	7	9	14	sw.	U. S. Weather Bureau	
Kansas City Univ.	Jackson	908	1	55.0	.....	85	23†	22	12	36	1	5.25	.....	2.31	0	10	9	8	13	nw.	University of Kansas City	
Kidder	Caldwell	1,020	47	51.9	- 0.3	82	24†	20	12	35	51	3.92	+0.64	1.58	T.	14	15	3	12	sw.	Mrs. Geraldine Terry	
King City	Gentry	1,095	50	50.7	- 1.2	81	24†	19	12	37	57	3.17	+0.09	1.40	2.0	9	14	7	9	nw.	John M. Martin	
Kirksville	Adair	969	50	50.7	- 1.2	81	24†	19	12	37	57	3.17	-0.93	1.17	T.	11	10	11	9	nw.	Charles Noble	
Lawson	Ray	1,070	1	51.8	.....	81	23†	20	12	33	1	3.57	.....	1.81	0.6	11	9	11	10	nw.	Elmer E. Lamb	
Linneus	Linn	816	1	.....	.....	.....	.....	.....	.....	7	3.24	.....	.....	0.85	T.	14	12	8	10	nw.	H. D. Taggart	
Louisiana	Pike	469	45	50.4	- 3.6	85	25	22	12	39	58	3.92	+0.20	1.47	T.	10	12	6	12	w.	Stark Bro's Nurseries	
Macon	Macon	875	40	50.2	- 2.9	84	24†	20	12	38	46	3.13	-0.53	0.71	T.	12	11	8	11	nw.	Mrs. W. C. Brown	
Maryville	Nodaway	1,169	49	51.3	+ 1.0	84	24	18	12	37	45	3.28	+0.27	1.13	2.0	9	9	7	14	nw.	R. B. Montgomery	
Memphis	Scotland	787	0	49.0	.....	84	24	20	12	38	9	5.26	+2.06	1.96	0	12	7	10	13	nw.	John W. Alexander	
Mexico	Audrain	800	50	51.8	- 2.0	86	25	21	12	40	61	5.17	+1.42	1.10	0	13	.....	.....	.....	w.	Mrs. Abbie Snoddy	
Moberly	Randolph	875	2	51.8	.....	84	24†	22	12	33	2	3.47	.....	1.05	0	10	12	10	8	w.	McCormick Hospital	
Oregon	Holt	1,048	83	53.4	+ 0.7	88	23	22	12	36	83	3.84	+0.55	1.32	1.0	10	15	8	7	nw.	Miss Mina Wright	
St. Charles	St. Charles	520	51	53.2	- 2.4	88	24	24	12	39	61	6.55	+2.80	2.08	T.	12	13	9	8	sw.	Martin L. Comann	
St. Joseph	Buchanan	957	29	53.4	- 0.1	85	23	25	12	31	67	2.71	-0.48	1.16	T.	12	9	9	12	nw.	U. S. Weather Bureau	
Steffenville	Lewis	650	41	51.0	- 2.1	83	25	21	12	34	46	4.23	+0.65	1.40	T.	12	8	14	8	n.	Frank Hall	
Tarkio	Atchison	916	36	52.0	- 0.2	87	23	20	12	43	45	3.54	+0.30	1.13	2.0	9	9	12	9	sw.	Albert Volker	
Trenton	Grundy	822	43	52.3	- 0.4	83	24	22	12	36	44	3.48	-0.10	1.16	1.0	9	16	4	10	s.	W. H. Estes	
Unionville	Putnam	1,062	46	50.8	- 0.2	86	24	20	12	43	46	4.44	+0.74	1.97	0	10	17	1	12	sw.	John H. Schick	
Warrenton	Warren	816	57	53.5	- 1.3	85	24	21	12	33	49	7.52	+3.48	1.58	T.	12	8	10	12	nw.	Prof. A. W. Ebeling	
Keokuk, Iowa	Lee, Ia.	574	67	50.4	- 1.9	83	24	23	12	29	67	4.96	+1.97	1.84	T.	14	8	7	15	nw.	U. S. Weather Bureau	
Division means and extremes																						
.....	.....	.....	.....	51.9	- 1.2	88	23†	17	12	43	.....	4.35	+0.96	4.67	0.3	11	11	8	11	nw.	.....	
Southeastern Division																						
Appleton City	St. Clair	813	44	52.7	- 3.4	85	25	20	12	38	47	4.03	-0.10	1.49	T.	10	12	3	15	ne.	Rolla Brown	
Bolivar	Polk	1,071	36	54.0	- 2.3	83	25	23	12	34	44	4.63	+0.46	2.15	T.	12	7	12	11	sw.	Southwest Baptist College	
Boonville	Cooper	650	1	52.0	.....	83	25	23	12	36	62	3.41	-0.46	1.77	0	11	14	1	15	nw.	Boonville Water Dept.	
Clinton	Henry	765	46	53.9	- 2.4	85	25	22	12	36	52	4.53	+0.36	1.89	0.3	11	.....	.....	.....	.....	U. S. Weather Bureau	
Dean	McDonald	1,000	35	54.7	- 2.0	86	26	18	7	45	40	2.57	-2.12	0.88	0	7	11	6	13	w.	E. S. Taylor	
Eldon	Miller	934	44	51.8	- 3.6	84	25	22	13	45	40	5.25	+1.09	1.96	T.	12	5	13	12	s.	E. H. Shepherd	
Garber	Taney	950	5	55.4	.....	87	25	19	7	52	5	5.53	.....	1.73	0	9	8	5	17	e.	William H. Durham	
Harrisonville	Cass	904	61	51.3	- 2.6	82	23†	17	12	41	64	4.62	+1.24	1.70	0	13	9	4	17	nw.	John H. Patterson	
Jefferson City	Cole	557	49	51.7	- 4.3	84	25	20	12	43	57	5.81	+1.83	1.60	T.	11	11	8	11	sw.	Mrs. Frank Kliegel	
Lakeside	Miller	595	8	53.6	.....	85	25	26	12	42	8	5.02	.....	2.08	.....	11	.....	.....	.....	nw.	W. S. Frame	
Lamar	Barton	980	51	54.0	- 2.6	85	25	23	12	43	58	3.17	-1.35	1.05	0	8	9	10	11	nw.	Jesse A. Mann	
Lebanon	Laclede	1,265	51	53.0	- 2.5	83	25	20	12	37	52	5.73	+1.38	2.23	0	10	11	6	13	s.	Mrs. Rosa E. Montellus	
Lexington	Lafayette	688	54	53.0	- 1.6	84	24	24	12	38	55	3.79	-0.01	1.40	T.	14	17	4	9	w.	Miss Carrie Loomis	
Lockwood	Dade	1,078	33	53.6	- 2.9	85	24†	23	12	35	43	3.68	-0.85	1.63	0	9	13	6	11	nw.	Hubert A. Nieman	
Marshall	Saline	779	52	53.4	- 1.4	84	24	23	12	35	49	3.07	-0.82	1.32	T.	8	17	6	7	sw.	Sec. Chamber of Commerce	
Mountain Grove	Wright	1,463	38	54.0	- 0.9	82	9	22	7†	39	42	6.27	+1.75	2.52	0	10	10	14	6	nw.	Mo. Fruit Exp. Station	
Mount Vernon	Lawrence	1,174	27	54.8	- 1.3	85	26	23	11	37	39	2.72	-1.73	1.15	0	6	6	20	4	s.	G. H. Boswell	
Neosho	Newton	1,011	52	56.6	+ 1.7	85	25†	23	7	40	56	2.22	-2.34	1.15	0	6	11	11	8	nw.	C. S. Fisheries Station	
Nevada	Vernon	862	46	56.1	+ 0.4	88	26	22	12	39	47	3.53	-0.76	1.34	0	9	14	4	12	sw.	T. J. Kaupp	
Sedalia	Pettis	910	26	55.3	0.0	83	25	22	12	39	28	7.39	+3.66	3.88	T.	12	13	8	9	nw.	Dr. J. E. Cannaday	
Seligman	Barry	1,542	38	.....	.....	.....	.....	.....	.....	36	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Floyd E. Fawver	
Seymour (near)	Webster	1,642	33	52.5	- 3.2	79	9†	21	12	38	33	4.75	+0.43	1.70	T.	8	11	5	14	nw.	A. L. Halley	
Springfield	Greene	1,301	51	54.1	- 1.9	81	25	25	12	33	51	3.65	-0.21	1.17	T.	10	9	7	14	se.	U. S. Weather Bureau	
Versailles	Morgan	1,037	12	53.9	- 2.0	85	25	22	12	38	15	5.50	+1.06	2.31	T.	10	11	4	14	nw.	E. M. Wilson	
Warrensburg	Johnson	878	52	53.5	- 2.6	84	25	21	12	33	59	4.79	+1.13	2.57	T.	8	9	7	14	sw.	E. A. Markey	
Warsaw	Benton	687	38	54.0	- 2.7	84	25	20	12	40	44	4.07	-0.39	0.90	0	15	9	6	15	sw.	Everett Martin	
Division means and extremes																						
.....	.....	.....	.....	53.7	- 2.2	88	25†	17	12	52	.....	4.32	+0.27	3.83	T.	10	11	7	12	nw.	.....	
</																						



Daily Precipitation for April 1939

Stations	Drainage-basins	Day of month																														Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		..
Northern Division																																	
Amity <sup>2</sup>	Graud	.23	.07		T.	.73	.01				.42	.59	T.		T.	1.16	T.	T.	.35	T.	.04	.03						T.	T.				3.63
Bethany	do	.15		.25	.59						.62	T.			T.	1.05	.35	.32			.06												3.35
Bowling Green <sup>2</sup>	Mississippi	.07	.11		.64	.25					.36					.73	.24	.25	.12	.05		.40											5.20
Brunswick <sup>2</sup>	Grand	.14	.03	.12	.60	.17					.07	.18				.02	.51	1.26	.20	.10	.03		.18										3.66
Canton, Lock No. 20 <sup>2</sup>	Mississippi	.08	T.	T.		.31	.07		T.		.07	.44	T.			.02	1.78	.50	.77	.03	.01		.19						.02	.05			4.44
Centralia <sup>2</sup>	do	.20			.58	.23					.40						1.18	.82	.46	.08			.46						.31	.06			3.87
Chillicothe <sup>2</sup>	Grand	.23	.30		.87						.11	.47					1.18	.23	.13	.18	T.	.14	.08						.03				4.44
Clinton Hill	Chariton	.12	.23		.81						.31	T.					.95	.25	.42	.12		.06	.05						.05				3.47
Columbia <sup>2</sup>	Missouri		.03		.04	.85					.15						2.36	.26	.30	.02		.46								.05			3.87
Conception	do	.04	.11		.22	.63					.63	T.					1.18	.07	.30	T.		.08						.01	.04	T.			4.52
Edgerton	Missouri	.03		.10	.10						.36	T.					2.65	.03	.84	T.		.25											3.26
Edina <sup>2</sup>	Mississippi	.11	T.	.08	.23	T.					.08	.36				T.	2.32	.59	.36	.09	T.		.29										4.44
Elsberry	do	.06	.09		1.16						.17				.10	1.42	.82	1.01	.11			.32							.14	.06			4.71
Farber <sup>2</sup>	do	.06	.05		.65	.37					.03	.51					.56	1.38	1.26	.20		.42							.26				5.52
Fayette	Missouri	.06	.06		.86						.25						1.32	.16	.26	.04		.24	T.						.09				5.58
Fulton <sup>2</sup>	do	.19		.03	.54	.55						.14					1.50	1.74	1.10	.09	T.		.36										3.25
Gallatin <sup>2</sup>	Grand	.10	.30		.48	.07					.20	.60					.99	.20	.30	.35		.07							.29				6.53
Gorin	Mississippi	.12	T.		.23		T.				.58	T.				1.05	1.20	.36	.85	T.		.31											3.66
Grant City	Grand		.13	T.	.37	.38					.38	T.		T.			.94	.12	.40	.08		T.							.25	.12			4.57
Hannibal <sup>2</sup>	Mississippi	.04	.05	.13	.17	.35	.20				.05	.59					.62	.54	1.30	.03	.07		.23						.06	T.			2.80
Hermann <sup>2</sup>	Missouri	.16	.01		.30	1.14					.05						.58	1.90	1.72	.10	.03		.18										4.48
Kahoka <sup>2</sup>	Mississippi	.12		.08	.15	.08					.12	.38					.20	.80	1.96	.12													6.58
Kansas City Airport <sup>2</sup>	Missouri		.11	.51	.63					T.	.39	.02		T.	T.	4.66	.02	.29	.01		.13		.30						.65				4.98
Kansas City University	do	.03	T.	.08	.17	.35					.38	.03					2.31	.44		T.	T.	.14						.26					7.04
Kidder <sup>2</sup>	Grand	.21	.07	.01	T.	.57					.12	.52	.02				1.58	.25	.10	.34	T.	.05	.07							.32	T.		5.25
King City	Missouri		.12		.34	.43					.68	.02					1.40	.02	.30	T.		.08											3.92
Kirksville	Mississippi	.14	.10		.24						.44	T.				.07	1.17	.37	.26	.03		.32											3.39
La Belle <sup>2</sup>	do	.12			.15	.30					.52						1.25	.68	.44	.08		.17							.03				3.17
Lawson	Missouri		.02	.24	.58						.31	.02					1.81	.09	.16	.02		.25							.64	.10			4.45
Linneus <sup>2</sup>	Grand	.12	.12	.10	.35	.02					.07	.48	.01				.85	.58		.15	T.		.21										3.57
Louisiana	Mississippi		.17		1.00	.03					.25						1.47	.30	.05	.20		.15	.30						.11	.07			3.24
Lucerne <sup>2</sup>	Grand	.11	.12		.39	.08					.24	.53					1.61	.45	.41	.20													3.92
Macon <sup>2</sup>	Chariton	.13	.13		.40	.02					.09	.24	T.				.70	.71	.85	.05	T.	.10											4.24
Madison <sup>2</sup>	Mississippi	.10	.03	.15	.61	.22					.14	.39					.43	.65	.50	.10	.01		.30						.01	.04			3.13
Maryville	Missouri		.11	T.	.50	.57					.38	T.					1.13	.03	.39	.15	T.		.22						.15				3.74
Memphis <sup>2</sup>	Mississippi	.12		T.	.27	.02					.13	.55				.02	1.96	.42	.72	T.		.41								.02			3.28
Mexico <sup>2</sup>	do	.08	.09	.05	.59	.35					.45					1.10	1.00	.80	.03	.05		.50							.59	.05			5.26
Milan <sup>2</sup>	Grand		.15	.02							.65	.17	.03				1.23	.36	.52	.08		.18							.08				5.17
Moberly	Mississippi	.10	.17		1.05						.37						.85	.23	.40	.10		.07	.13						.48	.03			3.90
Monroe City	do		.16		.70						.46						.96	.53	1.18	.09		.17											3.47
Oregon	Missouri		.06	.06	.64	.44					.65	T.					1.32	.02	.46	.10		.09							.43	.02			4.70
Palmyra <sup>2</sup>	Mississippi	.05	.20		.50	.25					.10	.50					.97	.17	.75	.17	.09		.18										3.84
Paris <sup>2</sup>	do	.07	.08	.03	.55	.36					.01	.40					.47	.78	.75	.17	T.	.22							.11	.05	T.		5.09
Perry <sup>2</sup>	do		.04	T.		.85					.25						.45	1.05	.65	.20	.05		.52						.73	.02			4.64
Philadelphia <sup>2</sup>	do				.32						.20						1.01	.48	.52	.10	.05		.11										4.30
St. Charles <sup>2</sup>	Missouri		.03	.07	.53	.88					T.	.08					.46	1.62	1.78	.10	.03		.52						.18				2.97
St. Joseph <sup>2</sup>	do	T.	.01	.09	.44	.05					.54	.01			.63	.53	.02	.30	.02		.07												6.55
Saverton, Lock No. 22 <sup>2</sup>	Mississippi		.16		.49	.26					.82						.70	.74	.10	.04	.03		.07										2.71
Shelbina	do	.15			.60						.50						.93	.37	.92			.11	.34						.02	.02			3.72
Shelbyville <sup>2</sup>	do		.05		.55	.11					.34						.93	.56	1.05			.47							.12	.11			4.05
Steffenville	do	.10	.15		.34						.50	.09					1.40	.40	.54	.04		.13	.27										4.09
Tarkio	Missouri		.13	.06	.75	.38					.36	T.					.97	.25	.33	.31									.50	.04			4.23
Trenton	Grand	.29			.54						.89	T.					1.16	.07	.28	.14		.09											3.54
Troy <sup>2</sup>	Mississippi	.05	.08		.50	.77																											



## Daily Precipitation for April 1939—Continued from preceding page

Stations	Drainage-basins	Day of month																														Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
<i>Southeastern Division—</i>		<i>Concluded</i>																															
Bragg City <sup>2</sup>	St. Francis	.05	.10	.05		1.68					.58						1.70	1.02			.44						T	.08				5.7	
Campbell	do	.13	.07		.12	.08	1.88				.42					.29	2.76	.93		.03	.33						T					7.0	
Cape Girardeau <sup>2</sup>	Mississippi	.07	T			.14	2.00				.51						1.68	1.72	T		.39								T			6.4	
Caruthersville <sup>2</sup>	do	.07	.05		.06	.01	2.19				.53	.02					1.70	1.00		.03	.50							.02	.04			6.2	
Centerville <sup>2</sup>	Black	.04			T	.33	1.94				.20						4.00			.03	.42							.08	.07			7.1	
Crystal City <sup>2</sup>	Mississippi	.14	.02			.47	1.16										3.97	.03			.49						.10					6.3	
Cuba <sup>2</sup>	Meramec					1.03	.85										2.36	1.50			.73											6.2	
Dexter <sup>2</sup>	St. Francis	.02			.02	.04	1.75				.24						1.75	2.65			.52												6.9
Doniphan	Black	.12	.16		.02	1.24	.85				.13					.05	3.11	.15			.53								.04				6.4
Farmington	St. Francis	.08	T			2.02	.06			T	.03					T	2.00	.59	.02		.49						.08			.07			5.4
Fisk <sup>2</sup>	do	.02	.04		T	1.01	.97				.63	T					1.56	2.03	T		.49								.03				6.8
Fredericktown <sup>2</sup>	do	.04				.22	2.08				.06						1.28	1.63			.48								.06				5.9
Goodland	Black					2.00	.17				.11						2.72	1.44	.05		.46												6.9
Greenville	St. Francis					1.63	.44				.23						T	2.61	1.24		.37					T							6.5
Jackson	Mississippi	.13				.96	1.12				.30						1.35	1.93	.10		.47									.10			6.4
Jerome <sup>2</sup>	Gasconade	.13				.30	1.50										1.80	1.74	.10	.07	.30					1.00							6.9
Koshkonong	Black	.19	.19		.07	1.55	.32				.02			.01		.06	3.02	.75	.03	T	.28						.16	.13					6.7
Leeper <sup>2</sup>	do				.05	.22	2.00				.50						1.70	1.63	.05		.40								.10				6.6
Licking (near)	Gasconade		.04		.10	1.75				T							1.72	.90	.02	T	.30							.43					5.2
Marble Hill	Mississippi					1.20	.70				.30						2.40	.85			.35												5.8
Meramec Park <sup>2</sup>	Meramec	.21				.48	.95										1.90	.93	.10	.03	.63						.19						5.4
Morehouse	Mississippi					.48	1.53				.22					.63	2.92	1.17		.55						.04		.07					7.6
New Madrid <sup>2</sup>	do	.09	.02		.03	.32	1.12				.40		T	T			1.46	.87	.05		.50					.01	.02		T				5.5
Owensville <sup>2</sup>	Gasconade					.60	.90										.60	1.27	.15		.36						.15						3.6
Pacific <sup>2</sup>	Meramec	.40				1.50					.10					.20	2.05	1.70	.15	.11	.68						.40						7.2
Panna <sup>2</sup>	St. Francis					1.68					.30						2.40	1.75	.07		.40								.24				6.8
Poplar Bluff <sup>2</sup>	Black	.13	.04		.05	1.01	.82				.11						1.40	1.77	T		.55								.16				6.1
Richwoods <sup>2</sup>	Meramec	.15				.45	1.25					T					2.65	2.00	.10		.78						.19						7.5
Rolla	do	.08	.01		T	1.79				T	.01	T				.15	1.59	1.13	.11	.10	.36						.38						5.7
St. Louis <sup>1</sup>	Mississippi	.01	.10			1.42	T	T		T	.12	T				.04	1.78	1.60	.16	.08	.38	.01					.15	T	T				5.8
St. Louis Airport <sup>2</sup>	Missouri	T	.10			1.36				T	.02					.03	1.83	1.29	.36	.05	.47	.01					.19	T	T				5.7
St. Louis University <sup>2</sup>	Mississippi	.01	.11			1.46				T	.10	T				.09	1.61	1.49	.10	.08	.37	.01					.18						5.6
Salem <sup>2</sup>	Meramec	.06			.03	.32	1.91										2.66	1.92	.14	.07	.49						.61						8.2
Sikeston <sup>2</sup>	Mississippi	.02				.15	1.64				.24					.02	.53	.91	1.26	.13	.12	.47					.23						6.6
Union	Meramec	.19	T			1.65	T			.05					.06	.05	1.52	2.00	.21	.10	.68						.53						7.1
Valley Park <sup>2</sup>	do	.19	T			.32	1.28				.17	T					1.21	2.00			.28						.17						5.5
Van Buren	Black					1.51	.36				T						1.60	1.76	.06	T	.49						T						6.3
Wappapello Dam <sup>2</sup>	St. Francis	.08			T	.25	1.94				.17					.16	.50	1.46	1.87	.06	.07	.49				.39							6.8
Washington Univ. <sup>2</sup>	Mississippi	.17	.02	.08		.39	1.09				.09				.16	.50	1.46	1.87	.06	.07	.49				.09	.14			.20	.26			7.6
West Plains	Black	.10	.12		.14	1.56	.03			T							T	3.96	1.05	.04	T	.09	.14										6.7
Williamsville <sup>2</sup>	do	.07				.24	2.01				.17						.96	1.93		.05	.51									.07			6.0
Willow Sprgs. (near) <sup>2</sup>	White	.05	.12		.18	.38	1.50										.20	2.78	.10		.40								1.07				6.7
Zalma (near) <sup>2</sup>	Mississippi				.23	1.78					.03						1.74	1.79	.04	.02	.38						T	T					6.0
Cauro, Ill. <sup>1</sup>	do	.03	.01			1.59	.02			T	T	T			T	T	.51	2.01	.07	.05	.33	.02				.01	.02	T		.01			4.9

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation.

<sup>1</sup> First-order Weather Bureau station: precipitation is for the 24-hour period, midnight to midnight, unless otherwise indicated. <sup>2</sup> Precipitation is measured in the morning: amount then recorded is for the preceding 24 hours. <sup>3</sup> Precipitation is for 24-hour period, midnight to midnight. <sup>4</sup> Precipitation measured with recording gage. <sup>5</sup> Included in next measurement. <sup>6</sup> Trace, or precipitation less than 0.01 inch. <sup>7</sup> Estimated. <sup>8</sup> Partially estimated. <sup>9</sup> Incomplete.

NOTE:—In addition to the stations shown on daily temperature page, records of daily temperatures are kept at the following stations in Missouri: Advance, Appleton City, Bethany, Bolivar, Boonville, Campbell, Canton Lock No. 20, Clifton Hill, Columbia Airport, Conception, Dean, Edgerton, Elsberry, Fulton, Goodland, Greenville, Kansas City University, Kidder, Kirksville Airport, Koshkonong, Lakeside, Licking (near), Lockwood, Marble Hill, Memphis, Mount Vernon, St. Joseph Airport, St. Louis Airport, St. Louis University, Saverton Lock No. 22, Seligman, Seymour (near), Springfield Airport, Steffenville, Tarkio, Versailles, Wappapello Dam, Warsaw, and Washington University.

## Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for April 1939

(See precipitation data in daily precipitation table)

Station	Data	Day of month																														Monthly		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		..	
Columbia.....	{ Evaporation .....	....	.121	.075	.101	.	.173	.069	.162	.141	.129	.002	.081	.096	.173	.100	.002	..	.096	.029	.059	..	.056	.043	.216	.276	.377	.079	.144	.233	.098	.177	...	3.43
	{ Mean temperature .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	{ Wind movement .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lakeside ..... (Osage Dam)	{ Evaporation .....	.088	.141	.174	.087	.211	.044	.113	.212	.154	.203	.058	.105	.128	.221	.136	.224	.082	.212	.007	.093	.036	.171	.295	.400	.399	.403	.166	.285	.113	.243	...	5.20	
	{ Mean temperature .....	50	57	48	56	50	36	40	48	58	56	42	36	46	59	62	60	50	40	47	48	50	55	68	68	70	68	65	58	58	60	..	53.1	
	{ Wind movement .....	33	46	39	16	84	65	91	111	28	39	69	102	53	105	110	49	72	218	95	33	60	41	69	93	80	41	32	58	41	34	..	2,007	
St. Louis (Washington University)	{ Evaporation .....	.141	.153	.035	.103	.146	.084	.102	.139	.122	.046	.063	.048	.139	.165	.160	.094	.061	.159	.002	.024	.060	.111	.208	.268	.260	.221	.135	.241	.112	.188	...	3.79	
	{ Mean temperature .....	52	52	50	54	48	37	40	46	54	58	44	36	46	56	66	61	54	41	40	48	49	54	66	72	72	68	66	57	56	60	..	53.1	
	{ Wind movement .....	47	45	26	42	52	135	71	68	37	45	113	73	48	83	55	50	60	92	46	21	75	43	59	71	61	54	40	83	99	43	..	1,83	



## Daily Temperatures for April 1939

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Mean		
Northern Division																																	
Brunswick	Maximum	60	63	57	68	51	49	56	59	76	54	45	48	57	69	65	63	53	40	57	51	59	74	82	84	85	78	78	69	72	77	63.3	
Brunswick	Minimum	39	41	37	37	43	30	27	28	35	43	35	23	23	40	53	50	46	35	37	37	39	39	39	51	57	59	55	50	48	41	40.6	
Chillicothe	Maximum	58	63	57	66	51	38	57	55	75	51	42	49	57	68	63	59	45	38	59	58	58	75	82	84	81	83	81	77	70	72	62.3	
Chillicothe	Minimum	38	42	35	42	47	29	25	32	40	45	32	21	30	41	54	50	40	33	36	37	37	42	52	58	61	54	51	45	43	42	41.1	
Columbia	Maximum	60	59	58	68	57	38	54	57	77	54	45	46	58	71	68	65	56	42	52	55	58	74	83	84	84	77	78	65	70	76	63.0	
Columbia	Minimum	42	47	41	46	38	28	27	35	45	42	33	23	40	53	52	47	35	35	37	42	40	42	56	60	62	61	54	52	46	44	43.5	
Fayette	Maximum	59	59	57	67	64	45	53	57	76	66	48	45	56	70	69	64	56	41	54	55	56	73	81	83	83	78	78	71	69	76	63.6	
Fayette	Minimum	40	46	38	43	39	29	25	32	40	44	31	22	39	49	56	50	39	34	36	40	38	39	50	54	57	60	55	50	45	43	42.1	
Grant City	Maximum	60	64	58	60	51	46	55	58	73	65	53	49	55	69	67	70	67	38	59	62	60	75	83	86	85	84	79	71	73	78	65.1	
Grant City	Minimum	35	41	36	41	39	26	24	25	36	44	26	17	32	52	49	42	34	32	30	45	35	39	53	60	59	52	46	44	40	43	39.2	
Hannibal	Maximum	55	58	55	62	57	44	52	51	65	65	44	47	51	68	67	63	60	46	48	51	56	69	78	83	79	76	74	64	65	75	60.9	
Hannibal	Minimum	40	43	36	40	38	27	25	29	35	43	31	21	30	48	46	46	44	32	35	37	38	38	54	58	59	58	53	49	42	48	40.8	
Kansas City Airport	Maximum	62	64	56	64	55	38	58	60	76	58	43	41	63	70	68	58	48	41	60	56	58	77	85	84	88	80	77	69	71	76	63.4	
Kansas City Airport	Minimum	44	48	39	46	38	32	32	37	43	41	29	27	40	55	56	48	34	38	36	45	41	46	58	62	64	58	54	47	48	45	44.4	
Kirkville	Maximum	55	62	61	64	58	44	52	56	70	62	43	46	52	66	64	62	59	43	55	54	56	71	80	81	81	76	75	69	70	76	62.1	
Kirkville	Minimum	38	42	38	41	40	26	22	23	33	40	29	19	25	48	47	48	35	32	35	42	37	37	54	58	60	54	51	48	42	41	39.3	
Lawson	Maximum	60	62	56	62	53	40	55	58	75	63	47	43	58	67	66	59	50	38	58	55	56	73	81	81	81	76	74	67	70	76	62.1	
Lawson	Minimum	39	45	36	45	35	29	25	32	42	43	29	20	37	51	56	50	33	33	31	45	38	40	53	59	59	55	49	41	44	47	41.6	
Macon	Maximum	40	44	30	30	44	28	26	28	30	33	33	22	25	48	55	48	45	33	38	35	40	36	45	56	54	60	48	50	37	48	39.6	
Macon	Minimum	58	62	58	66	49	40	54	58	70	48	46	47	55	68	59	67	48	42	56	52	58	73	82	84	84	78	76	66	69	76	61.6	
Maryville	Maximum	59	63	59	60	50	43	54	57	73	67	52	45	56	71	67	54	52	38	58	60	58	76	83	84	83	78	77	72	72	77	63.3	
Maryville	Minimum	35	45	37	44	39	27	23	28	39	45	27	18	36	53	52	49	32	32	29	46	35	39	56	60	61	52	44	42	45	43	40.4	
Mexico	Maximum	68	60	60	69	49	46	55	58	71	49	45	48	59	73	63	64	57	45	51	55	58	67	83	81	86	79	79	65	70	76	63.0	
Mexico	Minimum	39	39	34	39	45	27	24	25	31	37	46	35	21	29	33	55	48	43	32	35	37	36	40	51	57	58	59	47	42	40	40.6	
Moberly	Maximum	56	59	59	64	62	44	52	55	69	66	48	45	55	68	67	57	57	39	53	53	55	72	79	84	84	80	78	70	69	74	62.3	
Moberly	Minimum	40	48	35	40	38	28	26	29	36	42	30	22	32	50	55	51	39	32	35	41	38	41	53	57	58	58	54	50	42	41	41.2	
Oregon	Maximum	63	65	56	63	51	43	53	60	75	68	51	44	61	72	67	64	51	40	62	58	59	80	88	86	85	79	79	70	75	81	65.0	
Oregon	Minimum	37	45	38	44	39	28	28	31	42	44	26	22	31	41	72	67	64	51	40	62	58	59	80	88	86	85	79	79	70	75	81	65.0
St. Charles	Maximum	63	49	60	67	50	45	53	59	71	64	48	51	61	73	53	54	49	32	32	30	41	39	44	57	60	63	52	46	44	46	47	41.7
St. Charles	Minimum	40	44	38	37	45	31	27	34	38	46	39	24	32	32	59	54	45	35	36	36	41	37	47	58	62	61	52	43	43	43	42.3	
St. Joseph	Maximum	60	65	56	60	53	37	55	59	75	57	41	43	60	70	68	57	46	39	60	58	58	77	85	83	83	78	78	72	73	77	62.9	
St. Joseph	Minimum	40	48	41	46	36	30	29	35	45	44	27	25	38	55	56	46	33	36	34	45	42	46	59	64	64	55	50	49	47	49	43.8	
Trenton	Maximum	58	65	56	64	56	45	48	58	72	65	46	58	58	65	56	46	33	36	34	45	42	46	59	64	64	55	50	49	47	49	43.8	
Trenton	Minimum	38	40	36	42	44	27	25	31	37	42	32	22	36	45	40	42	42	33	36	42	36	41	49	49	61	54	54	46	45	43	40.3	
Unionville	Maximum	58	65	56	68	54	38	58	58	72	50	42	49	60	74	57	59	50	45	63	62	61	78	82	86	84	81	78	69	75	83	64.1	
Unionville	Minimum	35	36	33	37	39	25	24	25	29	38	30	20	23	34	43	45	42	31	33	34	36	38	43	56	57	50	50	47	45	46	37.5	
Warrenton	Maximum	60	57	57	67	66	42	51	54	71	71	46	44	58	71	72	65	62	56	46	61	56	73	82	85	84	82	75	74	67	73	64.3	
Warrenton	Minimum	42	43	38	40	42	28	25	32	40	44	39	21	35	46	57	55	45	33	35	36	39	40	54	62	59	59	55	50	41	45	42.7	
Keokuk, Iowa	Maximum	54	61	55	63	51	36	51	52	65	50	41	44	52	65	58	58	53	44	52	53	55	69	80	83	82	73	73	63	68	77	59.4	
Keokuk, Iowa	Minimum	38	43	37	42	36	28	26	31	36	40	26	23	31	49	46	45	37	34	37	42	41	40	57	61	62	58	52	48	48	48	41.5	
Southwestern Division																																	
Clinton	Maximum	65	67	60	68	63	45	53	61	76	72	50	42	60	74	70	64	59	42	67	57	58	76	82	83	85	79	78	74	69	78	65.7	
Clinton	Minimum	36	46	39																													



*Continued from page 16*

26th at Sedalia, Versailles, Rolla. Moderate, 14th at Kansas City University; 15th at Kansas City University and Warsaw. Heavy, 15th at Joplin, Carthage, Cartersville, Webb City, Springfield. 26th, 16 miles southwest of Warrensburg. (See special hailstorm notes).

Halos.—Solar, 1st, 2d, 3d, 6th, 7th, 9th, 20th, 26th; lunar, 7th.

Sleet.—5th, 10th, 13th, 18th.

Thunderstorms.—Local, 1st, 2d, 4th, 5th, 9th, 13th, 14th, 17th, 20th, 25th, 27th; more or less general, 10th, 15th, 16th, 26th.

Windstorms.—On the 15th at Carthage, Cartersville, and Webb City. At Carthage two buildings were wrecked and others damaged and power service was cut off for a time. At Webb City trees were uprooted, roofs and buildings damaged, and power service disrupted. On the 16th a windstorm occurred in the Sinkin Creek area in Dent County, northwest of Bunker, injured five persons seriously, wrecked houses rendering thirty persons homeless, and blew down some timber. A sawmill owner estimated his loss at \$30,000.

#### TORNADO

A small local tornado struck three miles southwest of Marshall at 2:30 a. m. on the 15th resulting in minor injury to six persons and property damage estimated at \$12,000 to \$15,000. One house, five barns, small outbuildings, fencing, and light poles were destroyed or damaged. The storm came from the southwest and traveled to the northeast, and path was about 300 feet wide.

#### HAILSTORMS

Advancing from northeastern Oklahoma and southeastern Kansas, a very severe and destructive hailstorm, accompanied

by high winds and torrential rains, struck Jasper County about 4 p. m., April 15th, resulting in heavy property and crop damage. The storm came from the west, southwest and northwest and was one and one-half to four miles wide and traversed most of Jasper County. Places hardest hit were Carthage, Cartersville, Joplin, and Webb City. Stones ranged in size from small particles to as large as goose eggs and baseballs. In some places hail piled up to a depth of twelve to fourteen inches. Windows, roofs, automobile tops, greenhouses, neon electric signs, crops, and fruit trees suffered severely. Blooms on fruit trees were beaten and blown off. The damage to greenhouses alone was estimated to run into thousands of dollars. Four thousand panes of glass were broken in one greenhouse establishment at Joplin.

At Carthage two persons were injured by flying glass and the damage (mostly from hail) was estimated at between \$250,000 and \$300,000 while damage to early barley and rye was estimated at 50 per cent and young oats were beaten into the ground in many places and gardens were almost ruined in the path of the storm.

Property damage at Cartersville was estimated at \$18,000 to \$20,000, and crop damage was estimated as slight.

A rather heavy hail also occurred on the 15th in the north portion of Springfield with considerable damage to greenhouses. Stones ranged to as large as nine inches in circumference.

#### DESTRUCTIVE LIGHTNING

One person was killed near Sedalia and twenty-five head of yearling steers were killed at Charleston by lightning on the 15th. The same day lightning struck and burned a garage building at Gower with damage of \$10,000.

#### ERRATA

March 1939, page 12: Mean temperature at Bethany should be 41.2, departure should be + 0.9; greatest precipitation in 24 hours at Advance should be 3.80; mean temperature at Rolla should be 48.5, departure should be + 3.0; snowfall at West Plains should be T.; greatest precipitation in 24 hours at West Plains should be 1.99. Page 15: Minimum temperature on 11th at Rolla should be 55, mean minimum should be 36.9.



## CLIMATOLOGICAL DATA

## MISSOURI SECTION

W. J. MOXOM  
ST. LOUIS, MO.

19

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MAY 1939

No. 5

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## GENERAL SUMMARY

While the average precipitation during May, over the State as a whole, was only 0.60 inch less than normal the distribution was decidedly uneven. Most of the southwest quadrant, and some central counties, received an excess of moisture as compared with the normal, ranging from slightly above normal in central counties to more than twice the normal amount in extreme southwestern counties. The reverse was true over most of the northern division, and the deficiency was greater than three inches over a large area covering most of the north-central portion of the State. This lack of sufficient moisture had a marked effect on all growing crops throughout most of the northern division. Much replanting of corn was necessary due to soil being too dry for seed germination during the original planting.

Temperatures were above normal throughout the State, except in a few counties in extreme southeast portion, where they were slightly below.

## TEMPERATURE

The monthly mean for the State, 84 stations reporting, was 67.4°, or 2.9° above normal. The highest monthly mean was 70.6° at Sedalia, and the lowest monthly mean was 64.8° at Seymour (near). The highest recorded was 102° at Unionville on the 24th, and the lowest was 31° at Doniphan on the 4th. The greatest daily range was 49° at Garber on the 10th.

## PRECIPITATION

The average for the State, 145 stations reporting, was 4.17 inches, or 0.60 inch less than normal. The greatest local monthly amount was 11.58 inches at Dean, and the least local monthly amount was 0.76 inch at Kidder. The greatest amount in any twenty-four hours was 3.83 inches at Paris on the 26-27th. The average number of days with 0.01 inch or more was 9. There was no snowfall anywhere in the State.

## MISCELLANEOUS PHENOMENA

Duststorms.—Locally on 10th and 24th.

Floods.—In Mississippi River, in reach bordering southern portion of State, continued from April to May 5th.

Fog.—Dense, 13th, 14th, 16th, 19th, 21st, 22d, 24th, 26th.

Frosts.—Light, 2d, 3d, 4th, 13th.

Hail.—Light, 7th at Bolivar and Grant City; 8th at Sedalia; 10th at Stover; 11th at Harrisonville, Lebanon, Sedalia; 17th at Kansas City, Grant City, Dean, Neosho; 18th at Kansas City, Lawson, Linneus; 20th at Neosho, Seligman and in Lawrence county; 25th at Maryville and Tarkio. Moderate, 11th at Maryville (slight damage to gardens and fruit); 21st at West Plains.

Halos.—Solar, 3d, 4th, 9th, 11th, 12th, 14th, 17th, 18th, 21st, 24th, 26th, 28th, 31st; lunar, 8th, 22d, 24th, 25th, 30th, 31st.

Thunderstorms.—Local, 3d, 4th, 8th, 9th, 10th, 12th, 13th, 14th, 15th, 17th, 19th, 20th, 21st, 22d, 23d, 24th, 25th, 26th, 27th, 30th; more or less general, 7th, 11th, 18th.

Windstorms.—A severe straight-line windstorm occurred on the 20th, between 1:15 p. m., and 2:05 p. m., in eastern Jasper county, moving from northwest to southeast across Lawrence county into northwestern Christian county. Places suffering

most damage were Aurora, Billings, Mount Vernon, McDowell, and Verona. At Aurora one person was seriously injured, six cows were killed, and property damage was estimated at \$10,000, crop damage \$25,000, fruit and shade trees \$75,000, and loss of stock \$575. At Billings damage to crops was estimated at \$2,000. At Mount Vernon and Verona the damage was mostly to roofs and trees, with no estimate of damage available.

(Continued on page 25)

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)				Wind				Relative humidity			
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6-30 a. m.	12 noon	6-30 p. m.
Columbia.....	29.93	30.32	2	29.51	8	7.0	27	n.	8	77	53	52
Kan. C. Airport.	29.90	30.34	13	29.57	7	8.1	27	sw.	5	74	46	43
St. Joseph.....	29.89	30.34	13	29.57	7	7.4	24	sw.	7	74	43	40
St. Louis.....	29.94	30.29	2	29.39	8	10.8	28	sw.	6	72	48	52
Springfield.....	29.94	30.26	13	29.52	8	7.7	24	e.	20	80	53	55
Carro, Ill.....	29.96	30.27	3	29.44	8	7.4	27	s.	25	81	55	56
Keokuk, Iowa..	29.93	30.36	2	29.52	8	6.8	31	w.	27	75	49	53

## COMPARATIVE DATA FOR MAY

Year	Temperature			Precipitation					Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. 0.1 in. or more	Clear	Partly cloudy	Cloudy
1888.....	62.1	93	30	4.98	6.23	4.73	3.98	....	5	..	..	..
1889.....	63.5	100	28	6.06	7.41	6.91	3.87	....	6	..	..	..
1890.....	62.8	97	26	3.65	2.91	4.62	3.43	....	5	..	..	..
1891.....	61.5	97	27	4.11	4.84	3.87	3.62	0	8	..	..	..
1892.....	60.9	91	25	6.04	5.74	5.11	8.28	0	17	5	9	17
1893.....	61.8	94	30	6.14	5.74	6.11	6.56	0	10	11	11	9
1894.....	63.7	96	29	4.31	2.60	5.18	5.14	0	8	13	11	7
1895.....	64.6	103	28	3.95	3.91	5.45	2.40	0	9	13	12	6
1896.....	70.1	91	30	7.17	5.99	10.29	8.22	0	12	12	12	7
1897.....	62.4	93	28	2.60	2.64	2.68	2.47	0	7	16	11	4
1898.....	65.2	97	31	7.68	8.36	7.81	6.88	0	14	12	10	9
1899.....	66.9	96	34	6.07	7.01	5.89	5.31	0	2	10	13	8
1900.....	63.8	98	30	6.63	5.00	6.00	4.09	0	10	14	11	6
1901.....	63.8	98	30	1.47	1.55	1.43	1.42	0	6	15	10	6
1902.....	69.4	98	39	4.82	5.31	5.65	3.51	0	11	13	11	7
1903.....	65.1	92	23	7.05	7.01	8.21	5.93	0	15	9	10	12
1904.....	63.1	95	32	4.74	5.46	5.40	3.35	0	12	13	10	8
1905.....	64.9	94	34	5.33	4.20	6.62	5.17	0	10	12	11	8
1906.....	66.3	98	27	2.45	2.08	3.02	2.25	0	7	15	10	6
1907.....	59.5	91	17	5.61	3.64	5.92	7.27	0.8	10	14	6	11
1908.....	66.1	96	24	6.91	8.16	6.77	5.79	0	12	12	10	9
1909.....	63.3	96	25	5.55	5.19	6.22	5.25	T.	9	15	9	7
1910.....	60.1	94	32	6.38	7.46	7.42	4.25	0	13	11	8	12
1911.....	68.8	101	27	1.46	2.45	1.10	0.84	0	5	19	7	5
1912.....	67.6	97	30	3.80	3.90	3.45	4.05	0	7	18	8	5
1913.....	65.8	101	33	2.79	3.82	3.16	1.40	0	8	16	7	8
1914.....	66.6	98	31	1.49	0.97	2.31	1.20	0	5	17	9	5
1915.....	63.7	97	30	7.72	8.34	8.11	6.70	0	12	12	7	12
1916.....	65.6	96	33	5.47	7.30	5.46	3.64	0	11	15	8	8
1917.....	58.7	91	30	4.28	4.14	5.38	3.32	0	10	15	7	9
1918.....	68.3	100	28	5.50	5.71	4.23	6.57	0	10	16	8	7
1919.....	62.0	93	35	5.74	5.65	5.96	5.61	0	13	10	9	13
1920.....	63.8	97	32	5.01	3.77	5.10	6.15	0	12	9	9	11
1921.....	66.4	102	28	3.68	3.80	3.68	3.55	0	7	17	8	6
1922.....	67.2	97	38	3.07	3.53	3.59	2.09	0	10	14	10	7
1923.....	62.7	97	25	4.68	2.45	4.40	7.18	T.	12	11	10	10
1924.....	58.6	96	31	4.71	3.18	5.13	5.83	0	10	13	8	10
1925.....	61.2	98	24	2.10	2.32	2.39	1.60	0	7	14	9	8
1926.....	67.0	100	29	2.78	2.42	3.34	2.58	0	7	16	9	6
1927.....	64.6	94	34	6.95	4.55	6.77	9.54	0	12	11	10	10
1928.....	65.8	95	29	2.87	2.05	3.16	3.41	0	8	16	9	6
1929.....	61.7	95	28	7.76	5.30	9.66	8.31	0.3	13	9	10	12
1930.....	64.7	95	33	3.33	3.22	3.78	2.98	0	9	16	8	7
1931.....	61.0	96	29	4.50	4.84	4.64	4.03	0	10	15	6	10
1932.....	66.1	98	31	1.80	2.44	2.03	0.93	0	6	18	9	4
1933.....	65.9	96	35	7.75	6.44	8.07	8.74	0	13	11	9	11
1934.....	69.0	110	31	1.93	1.82	2.42	1.56	0	5	21	7	3
1935.....	60.3	92	32	8.46	9.73	7.99	7.66	0	17	6	8	17
1936.....	68.8	95	32	2.52	3.07	2.95	1.54	0	7	17	10	4
1937.....	66.2	98	34	3.86	3.97	4.36	3.25	0	9	13	11	7
1938.....	65.0	94	32	6.13	5.32	7.75	5.31	0	13	9	12	10
1939.....	67.4	102	31	4.17	2.94	5.98	3.60	0	9	15	9	7
Period.....	64.5	110	17	4.77	4.67	5.92	4.45	T.	10	14	9	8



## Climatological Data for May 1939

Stations	Counties	Elevation, feet	Temperature, in degrees Fahr.							Precipitation, in inches				Number of days				Prevailing direction of wind	Observers		
			Length of record, years	Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Length of record, years	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelting	With precip., .01 inch or more	Clear			Partly cloudy	Cloudy
Northern Division																					
Bethany	Harrison	916	44	67.4	+ 4.9	96	24	39	13	41	46	1.01	-3.16	0.50	0	6	18	7	6	se.	A. S. Cumming
Brunswick	Chariton	652	58	67.8	+ 3.6	96	24	42	1	37	60	3.05	-1.56	1.10	0	6	21	7	3	se.	O. K. Benecke
Canton, Lock & Dam 20	Lewis	488	1	66.6	.....	89	24	42	4	32	9	5.01	-0.31	2.75	0	8	15	5	11	s.	Lockmaster
Chillicothe	Livingston	779	30	68.2	+ 5.3	98	24	43	13	36	33	0.96	-1.33	0.31	0	5	20	7	4	s.	Wm. J. Olenhouse
Clifton Hill	Randolph	731	40	66.6	+ 3.0	91	24†	41	1	34	30	3.09	-1.31	1.61	0	11	15	11	5	sw	Dr. A. J. Bradsher
Columbia	Boone	740	49	68.1	+ 3.1	92	24	46	13	29	49	5.00	+0.54	2.17	0	9	12	10	9	s.	U. S. Weather Bureau
Conception	Nodaway	980	50	69.5	+ 7.4	97	24	44	13	35	55	3.99	-0.07	2.01	0	7	16	12	8	se.	Fr. Adelhelm Hess
Edgerton	Platte	856	19	68.1 <sup>a</sup>	+ 5.1	97	31	36	13	45	28	1.30	-2.90	0.54	0	7	19	5	7	s.	Fred L. Stiff
Elsberry	Lincoln	449	8	67.6	.....	95	24	37	2	39	8	1.64	.....	0.75	0	7	16	13	2	s.	Ray E. Mills
Fayette	Howard	760	59	67.2	+ 3.4	91	24	43	3	30	56	3.36	-0.96	1.95	0	9	15	12	4	s.	Morrison Observatory
Fulton	Callaway	818	51	66.8	+ 2.2	92	24	38	3	36	47	5.80	+1.20	2.65	0	11	19	6	6	se.	Clyde C. Herring
Grant City	Worth	1,134	35	68.2	+ 6.2	95	24†	38	13	39	47	1.56	-2.67	0.65	0	6	7	19	5	se.	Howard Rybolt
Hannibal	Marion	759	47	66.6	+ 3.0	91	24	39	2	32	55	3.56	-0.79	1.42	0	8	9	8	14	sw.	Hannibal Water Dept.
Kansas City Airport	Jackson	741	50	70.1	+ 5.3	97	24	42	13	34	50	2.85	-1.80	1.35	0	10	13	9	9	sw.	U. S. Weather Bureau
Kansas City Univ.	Jackson	908	1	70.2	.....	95	24†	44	13	37	1	3.38	.....	1.68	0	10	18	7	6	sw.	University of Kansas City
Kidder	Caldwell	1,020	47	67.8	+ 5.2	95	24†	42	13	40	51	0.76	-2.89	0.22	0	8	17	2	12	se.	Mrs. Geraldine Terry
King City	Gentry	1,095	..	66.4	.....	95	24	38	3	32	57	1.07	-4.26	0.52	0	7	12	14	5	sw.	John M. Martin
Kirksville	Adair	969	50	66.4	+ 4.1	95	24	42	13	32	1	1.65	.....	0.87	0	6	14	13	4	s.	Charles Noble
Lawson	Ray	1,070	1	67.4	.....	92	24†	42	13	32	7	3.50	.....	1.46	0	7	18	7	6	sw.	Elmer E. Lamb
Linn	Linn	816	..	66.6	.....	90	17†	35	3	38	58	3.04	-1.66	1.16	0	8	15	13	3	w.	H. D. Taggart
Louisiana	Pike	469	45	65.6	+ 1.9	90	17†	35	3	38	58	3.04	-1.66	1.16	0	8	15	13	3	w.	Stark Bro's Nurseries
Macon	Macon	875	40	66.6	+ 3.1	93	24	38	2	34	46	2.56	-2.03	0.95	0	6	12	11	8	s.	Mrs. W. C. Brown
Maryville	Nodaway	1,169	49	68.4	+ 7.1	95	30	43	13	40	45	3.38	-1.27	1.29	0	7	14	3	14	se.	R. B. Montgomery
Memphis	Scotland	787	0	66.7	.....	94	24	41	2	34	9	1.56	-2.45	0.56	0	6	14	4	13	se.	John W. Alexander
Mexico	Audrain	800	50	67.6	+ 3.6	95	24	40	2	33	61	4.90	+0.30	2.17	0	6	20	3	8	sw.	Mrs. Abbie Snoddy
Moberly	Randolph	875	2	67.4	.....	94	24	40	2	32	2	3.61	.....	2.35	0	7	18	8	5	s.	McCormick Hospital
Oregon	Holt	1,048	83	69.8	+ 6.6	98	24†	42	13	40	83	2.33	-2.20	0.89	0	7	20	10	1	se.	Miss Mina Wright
St. Charles	St. Charles	520	51	69.0	+ 5.9	93	24	40	2	35	61	2.02	-2.26	0.50	0	8	23	7	1	sw.	Martin L. Wright
St. Joseph	Buchanan	957	29	70.0	+ 5.8	97	24	41	13	36	67	1.38	-3.32	0.53	0	10	14	11	6	s.	U. S. Weather Bureau
Steffenville	Lewis	650	41	66.9	+ 3.1	93	24	40	2	34	46	3.84	-0.73	1.35	0	6	12	13	6	s.	Frank Hall
Tarkio	Atchison	916	36	69.1	+ 6.5	99	24	38	14	40	45	2.63	-1.91	1.68	0	5	12	11	8	se.	Albert Volker
Trenton	Grundy	822	43	68.5	+ 5.0	95	24†	41	13	37	44	1.68	-3.02	0.48	0	7	15	10	6	s.	W. H. Estes
Unionville	Putnam	1,062	46	68.9	+ 6.8	102	21	40	11	41	46	1.94	-3.31	0.83	0	5	20	7	4	sw.	John H. Schick
Warrenton	Warren	816	57	68.0	+ 3.1	93	24	40	2	33	49	4.07	-0.33	1.10	0	10	10	16	5	sw.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.	574	67	67.4	+ 3.6	92	24	41	2	31	67	5.80	+1.87	4.40	0	10	10	8	13	sw.	U. S. Weather Bureau
Division means and extremes																					
..	..	..	..	68.0	+ 4.6	102	24	35	3	45	..	2.94	-1.73	3.83	0	7	15	9	7	sw.	..
Southwestern Division																					
Appleton City	St. Clair	813	44	66.4	+ 1.4	91	23†	41	3	41	47	3.98	-0.82	1.21	0	9	19	2	10	sw.	Rolla Brown
Bolivar	Polk	1,071	36	66.8	+ 2.0	89	24	44	3	31	44	7.58	+2.23	2.16	0	9	14	9	8	sw.	Southwest Baptist College
Boonville	Cooper	650	1	67.2	.....	91	24	44	3	31	62	4.37	-0.24	1.42	0	7	14	8	9	se.	Boonville Water Dept.
Clinton	Henry	765	46	67.6	+ 2.1	93	24	44	13	38	52	2.57	-2.26	1.27	0	7	..	..	..	.....	U. S. Weather Bureau
Dean	McDonald	1,000	35	65.8	+ 0.1	93	24	37	14	42	40	11.58	+5.83	2.14	0	14	18	9	4	w.	E. S. Taylor
Eldon	Miller	934	44	66.4 <sup>a</sup>	+ 2.2	92	23†	40	3	37	40	4.50	+0.20	1.35	0	9	11 <sup>a</sup>	11 <sup>a</sup>	8 <sup>a</sup>	sw.	E. H. Shepherd
Garber	Taney	950	5	65.4	.....	95	24	35	3	49	5	9.95	.....	3.06	0	11	11	8	12	e.	William H. Durham
Harrisonville	Cass	904	61	67.1	+ 3.3	92	24	42	13	34	64	4.81	+0.38	1.91	0	10	13	7	11	sw.	John H. Patterson
Jefferson City	Cole	557	49	66.8	+ 2.1	91	23†	41	3	36	57	5.43	+1.02	2.72	0	9	19	7	5	s.	Mrs. Frank Kliegel
Lakeside	Miller	595	8	66.4	.....	95	24	38	3	39	8	3.93	.....	1.18	0	8	..	..	..	sw.	W. S. Frame
Lamar	Barton	980	51	66.8	+ 1.2	90	23†	45	3†	35	58	7.97	+2.71	2.55	0	11	17	3	11	sw.	Jesse A. Mann
Lebanon	Laclede	1,265	51	66.0	+ 1.1	91	24	39	3	35	52	6.47	+1.26	2.91	0	10	11	10	10	s.	Mrs. Rosa E. Montelius
Lexington	Lafayette	688	54	69.4	+ 5.0	96	24	44	13	35	55	1.46	-3.50	1.07	0	8	16	11	4	s.	Miss Carrie Loomis
Lockwood	Dade	1,078	33	67.2	+ 2.8	90	23†	43	3	34	43	8.23	+2.91	2.00	0	11	17	7	7	se.	Hubert A. Nieman
Marshall	Saline	779	52	68.6	+ 4.4	93	24	45	3†	29	49	3.17	-1.44	0.75	0	9	20	5	6	sw.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	38	66.0	+ 2.2	86	24	43	3†	39	42	3.70	-0.76	0.85	0	8	14	14	3	se.	Mo. Fruit Exp. Station
Mount Vernon	Lawrence	1,174	27	66.2	+ 0.4	90	24	42	14	37	39	9.85	+4.34	1.95	0	12	9	19	3	s.	G. H. Boswell
Neosho	Newton	1,011	52	67.4	+ 1.4	91	24	40	14	39	56	8.76	+3.20	2.57	0	12	19	4	8	sw.	U. S. Fisheries Station
Nevada	Vernon	862	46	69.7	+ 5.2	94	24	45	3†	37	47	5.56	+0.63	1.90	0	11	17	5	9	sw.	T. J. Kaupp
Sedalia	Pettis	910	26	70.6	+ 5.3	96	23†	43	13	38	28	3.73	-0.81	1.85	0	7	22	3	6	sw.	Dr. J. E. Cannaday
Seligman	Barry	1,542	38	66.4	+ 1.9	86	24†	44	14†	38	36	10.49	+5.05	2.20	0	12	17	7	7	ne.	Floyd E. Fawver
Seymour (near)	Webster	1,642	33	64.8	+ 1.1	87	24	38	14	37	33	7.47	+2.64	2.95	0	9	15	11	5	se.	A. L. Hailey
Springfield	Greene	1,301	51	66.8	+ 2.3	90	23	45	14	33	51	6.64	+1.45	2.27	0	11	14	7	10	se.	U. S. Weather Bureau
Versailles	Morgan	1,037	12	67.4	+ 1.8	91	24	43	3	31	15	5.76	+1.06	2.95	0	9	19	3	9	sw.	I. M. Wilson
Warsburg	Johnson	878	52	68.4	+ 3.4	95	24	42	14	34	59	2.66	-2.06	1.08	0	7	18	7	6	sw.	E. A. Markey
Warsaw	Benton	687	38	67.6	+ 2.1	93	24	42	13	37	44	5.10	+0.10	1.85	0	12	18	4	9	sw.	Everett Martin
Division means and extremes																					
..	..	..	..	67.1	+ 2.4	96	23†	35	3	49	..	5.98	+0.79	3.06	0	10	16	8	7	sw.	..
Southeastern Division																					
Advance	Stoddard	355	2																		



Continued on next page

Stations	Drainage-basins	Day of month																															Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Northern Division																																		
Amtley <sup>2</sup>	Grand						.06	.22		.09		.01				T.			.08			T.		T.				.47	T.				0.93	
Bethany <sup>2</sup>	do			T.			.15	.05											.50								.15	.06	T.				1.01	
Bowling Green <sup>2</sup>	Mississippi							.23	.89							T.			.08									.48	.60	.04			1.84	
Brunswick <sup>2</sup>	Grand						1.10	1.02		.07									.67		.13							T.	.275	.27	.01			3.05
Canton, Lock No. 20 <sup>2</sup>	Mississippi			.03	T.		T.	.51	.64										.67		.09	T.						T.	.300	.10				5.01
Centralia <sup>2</sup>	do						.58	1.18											.26									T.	.39	.27				5.21
Chillicothe <sup>2</sup>	Grand						.08	.20	.31							T.			T.		.09							T.	.20	.17	.10			0.96
Citron Hill	Chariton						.06	1.61				.02							.08		.38							T.	.08	.39	.02			3.09
Columbia <sup>1</sup>	Missouri						.84	1.93		.02		T.		.29					.15		.07	.38						T.	.02	.71	.01			5.00
Conception	do		T.	T.			.06	1.74			T.	.01							.08									T.	.02	.71	.01			3.99
Edgerton	Missouri						.42	.20											.54			.03						T.	.07					1.80
Edina <sup>2</sup>	Mississippi			T.				.34	.29																			T.	.15	.74				1.52
Eisberry	do						.10	.51				.03																T.	.15	.74				1.64
Farber <sup>2</sup>	do							.36	1.10																			T.	.15	.74				2.99
Fayette	Missouri						.12	.95	T.										.79		.02							T.	.15	.74				3.36
Fulton <sup>2</sup>	do							.50	1.53		.30	.02	.03								.14							T.	.15	.74				5.80
Gallatin <sup>2</sup>	Grand						T.	.20											.46		.25							T.	.15	.74				0.86
Jorlin	Mississippi			T.			.18	.41							T.				T.									T.	.15	.74				1.66
Grant City	Grand			T.			.04	.65							T.						.16							T.	.15	.74				1.56
Hannibal <sup>12</sup>	Mississippi						.65	1.42			T.				T.				.02		.35	.05	.21					T.	.15	.74				3.56
Hermann <sup>2</sup>	Missouri						.50	2.00		.94					T.													T.	.15	.74				4.76
Kahoka <sup>2</sup>	Mississippi				.10	T.	T.		.35	.38																		T.	.15	.74				2.95
Kansas City Airport <sup>3</sup>	Missouri						1.28	.29			T.				.02													T.	.15	.74				2.85
Kansas City University	do						.92	.76																				T.	.15	.74				2.85
Kidder <sup>2</sup>	Grand						.05	.22	.15		.17		.05						.10		.01							T.	.15	.74				3.38
King City	Missouri						.25	.59							T.						.06							T.	.15	.74				0.76
Kirkville	Mississippi						.08	.52													.20							T.	.15	.74				2.15
La Belle <sup>2</sup>	do							.46	.52																			T.	.15	.74				1.07
Lavson	Missouri						.33	.87		.03					T.				.37			T.						T.	.15	.74				2.45
Linneus <sup>2</sup>	Grand						.59	.56							T.				.10		.03		.15					T.	.15	.74				1.65
Louisiana	Mississippi						.63		1.16		.05								.05									T.	.15	.74				3.50
Lucerne <sup>2</sup>	Grand			.06				.16	.08										.01									T.	.15	.74				3.04
Macon <sup>2</sup>	Chariton							.45	.88		.01								.01									T.	.15	.74				1.58
Madison <sup>2</sup>	Mississippi						.53	1.83		.03																		T.	.15	.74				2.56
Maryville	Missouri			.04	.02		.06	.88																				T.	.15	.74				4.86
Memphis <sup>2</sup>	Mississippi			.07	T.			.10	.34																			T.	.15	.74				3.38
Mexico <sup>2</sup>	do							.98	.95																			T.	.15	.74				1.56
Milan <sup>2</sup>	Grand						.23	.26											.25		.10	.45						T.	.15	.74				4.90
Moberly	Mississippi						.18	2.35		.03									.08		.09							T.	.15	.74				1.33
Monroe City	do						.66	1.01	.12			T.							.26									T.	.15	.74				3.61
Oregon	Missouri						.10	.45		T.					T.													T.	.15	.74				5.12
Palmyra <sup>2</sup>	Mississippi							.34	1.38		T.								.89			.03		.08				T.	.15	.74				2.33
Paris <sup>2</sup>	do							.92	.85		.03																	T.	.15	.74				3.87
Perry <sup>2</sup>	do							.80	.95																			T.	.15	.74				3.83
Philadelphia <sup>2</sup>	do							.18	1.01																			T.	.15	.74				3.35
St. Charles <sup>2</sup>	Missouri							.11	.44			.22																T.	.15	.74				5.24
St. Joseph <sup>1</sup>	do			T.			.15	.24			.02		T.		.03				.07									T.	.15	.74				2.02
Saverton, Lock No. 22 <sup>2</sup>	Mississippi						.66	1.90		.05					.06													T.	.15	.74				1.38
Shelbina	do						.04	1.08																				T.	.15	.74				3.92
Shelbyville <sup>2</sup>	do							.41	.63																			T.	.15	.74				2.62
Steffenville	do						.26	.90																				T.	.15	.74				2.68
Tarkio	Missouri																											T.	.15	.74				3.84
Trenton	Grand						.21	.37							T.				.08		.14	.25		.15				T.	.15	.74				2.63
Troy <sup>2</sup>	Mississippi							.22	.60		.09																	T.	.15	.74				1.68
Unionville <sup>2</sup>	Chariton			T.				.44	.10																			T.	.15	.74				2.16
Warrenton	Mississippi						.40	1.10	.22		.27	T.	.06															T.	.15	.74				1.94
Keokuk Iowa <sup>1</sup>	do			.09			.11	.99							.09													T.	.15	.74				4.07
Southwestern Division																																		
Altona <sup>2</sup>	Osage					.50	.23				.50																						2.94	
Appleton City	do						.20	1.17			.27	.08																					3.98	
Bollivar	do						2.16	1.60			.02	.88		.22																			7.58	
Boonville <sup>2</sup>	Missouri							1.31	1.42		.15																						4.37	
Buffalo <sup>2</sup>	Osage							2.70	1.18		.08	.15		T.																			7.81	
Caplinger Mills	do						.87	1.80		T.	.02	.40																					4.77	
Clinton	do						.46	1.27			.20	.02																					2.57	
Concordia <sup>2</sup>	Missouri							1.24	.58																								2.06	
Dean	Neosho						1.72	1.46			.44	2.14	.90																				11.58	
Eldon <sup>2</sup>	Missouri							1.35	1.08		.70	.10	.07																				4.50	
Galena <sup>2</sup>	White							1.02	1.09	T.		.48	2.27																				10.05	
Garber	do						.05	1.31	.02		T.	2.33	.73																					



Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation.

<sup>1</sup> First-order Weather Bureau station: precipitation is for the 24-hour period, midnight to midnight, unless otherwise indicated. <sup>2</sup> Precipitation is measured in the morning; amount then recorded is for the preceding 24 hours. <sup>3</sup> Precipitation is for 24-hour period, midnight to midnight. <sup>4</sup> Precipitation measured with recording gage. <sup>5</sup> Included in next measurement. <sup>6</sup> Trace, or precipitation less than 0.01 inch. <sup>7</sup> Estimated. <sup>8</sup> Partially estimated. <sup>9</sup> Incomplete.

NOTE:—In addition to the stations shown on daily temperature page, records of daily temperatures are kept at the following stations in Missouri: Advance, Appleton City, Bethany, Bolivar, Boonville, Campbell, Canton Lock No. 20, Clifton Hill, Columbia Airport, Conception, Dean, Edgerton, Elsberry, Fulton, Goodland, Greenville, Kansas City University, Kidder, Kirksville Airport, Koshkonong, Lakeside, Licking (near), Lockwood, Marble Hill, Memphis, Mount Vernon, St. Joseph Airport, St. Louis Airport, St. Louis University, Saverton Lock No. 22, Seligman, Seymour (near), Springfield Airport, Steffenville, Tarkio, Versailles, Wappapello Dam, Warsaw, and Washington University.

Observations taken at 8:00 a. m. except at 7:30 a. m. at Lakeside. For Columbia, Lakeside, and St. Louis (Washington University) descriptions see July 1938, April 1932, and August 1938 reports respectively. \* Included in next measurement. \*\*\*\* -0.42. tttt -0.63.

April 1939, page 18: Precipitation at Brunswick on 12th should be T.



## Daily Temperatures for May 1939

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Northern Division																																	
Brunswick §	Maximum	79	70	71	82	84	85	72	62	76	75	67	67	72	78	75	85	89	84	79	82	87	83	92	96	81	77	82	72	87	93	90	79.8
Chillicothe §	Minimum	42	47	47	48	53	54	60	50	48	48	48	48	45	48	51	52	53	62	60	60	61	61	63	65	70	67	65	62	57	58	64	55.8
Columbia	Maximum	81	69	71	85	84	85	76	65	78	74	68	63	74	79	76	87	90	80	81	82	86	83	92	98	82	80	83	77	89	94	92	80.8
Fayette	Minimum	49	45	48	53	53	57	61	57	47	53	41	46	43	45	49	52	59	60	59	59	58	60	63	62	69	65	63	61	54	64	67	55.6
Grant City	Maximum	77	70	70	80	83	85	74	62	75	77	65	66	70	75	75	81	87	81	78	81	84	83	91	92	78	79	81	72	82	87	87	78.3
Hannibal	Minimum	50	47	46	51	58	61	59	56	50	55	50	51	46	49	53	54	61	62	60	64	62	62	68	72	68	65	65	61	56	65	69	57.9
Kansas City Airport	Maximum	77	69	69	80	82	84	78	63	73	75	67	66	70	75	74	80	87	81	79	80	84	81	89	91	84	79	80	75	82	87	85	78.3
Kirksville	Minimum	50	46	43	50	55	55	63	51	50	52	48	51	46	48	51	50	59	60	59	62	59	62	64	71	69	59	65	61	55	60	66	56.1
Lawson	Maximum	47	46	51	54	55	58	58	44	51	45	47	38	49	46	50	60	59	55	60	55	56	64	70	68	63	63	60	50	64	66	55.2	
Louisiana	Minimum	73	66	65	76	80	84	79	69	74	70	65	59	68	74	79	80	85	80	83	89	88	87	91	86	82	81	77	77	86	85	77.8	
Macon §	Maximum	44	39	41	50	55	58	63	56	49	53	46	47	46	49	51	49	59	53	57	61	62	63	64	68	68	64	63	60	56	60	67	55.5
Maryville	Minimum	81	72	77	85	83	85	74	70	78	75	67	63	72	78	76	86	90	80	81	76	86	80	93	97	81	75	80	78	89	93	91	80.4
Mexico §	Maximum	50	52	53	58	63	63	58	58	51	60	51	50	42	56	55	52	66	62	60	61	62	65	65	73	68	67	66	63	55	71	71	59.8
Moberly	Minimum	75	69	67	79	81	81	79	68	74	71	65	65	71	75	75	81	87	80	76	81	85	85	90	95	90	76	79	72	81	87	87	78.2
Oregon	Maximum	45	40	39	50	55	57	63	58	47	54	41	45	42	50	49	55	54	55	60	57	57	62	70	67	63	64	60	50	63	69	54.6	
St. Charles §	Minimum	80	69	72	81	81	83	75	73	75	72	65	61	70	75	73	82	87	80	80	78	85	78	88	92	81	74	80	76	87	92	88	78.5
St. Joseph	Maximum	53	48	47	54	57	59	58	56	48	54	46	48	42	50	49	55	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Trenton	Minimum	78	76	76	84	82	81	75	68	78	71	66	62	74	78	76	87	90	82	81	79	82	79	91	95	85	85	80	82	89	95	90	80.5
Unionville §	Maximum	47	46	50	51	58	55	62	58	57	54	49	41	44	48	48	50	59	60	57	60	61	57	64	70	69	68	64	62	55	62	67	56.5
Warrenton	Minimum	78	69	79	87	88	94	74	67	81	75	69	67	80	83	82	91	92	73	82	87	92	84	94	102	89	87	83	74	86	94	94	83.2
Keokuk, Iowa	Maximum	74	72	70	79	85	85	83	64	73	79	73	64	70	74	73	81	87	80	83	83	87	91	93	91	85	83	79	80	88	87	80.1	
Keokuk, Iowa	Minimum	46	40	41	46	55	53	63	58	52	51	48	50	47	50	51	49	58	57	57	62	63	65	63	68	68	64	64	62	58	59	64	55.9
Clinton	Maximum	69	64	68	72	83	83	73	62	77	72	64	65	71	76	65	81	84	78	79	83	89	85	90	92	84	84	80	70	87	88	77.4	
Clinton	Minimum	43	41	43	52	59	59	62	57	51	56	45	47	50	54	53	52	59	51	61	64	67	67	66	61	70	65	64	61	59	65	71	57.3
Southwestern Division																																	
Eldon §	Maximum	81	77	74	82	84	85	80	63	74	80	70	64	75	75	74	85	86	81	81	80	85	80	91	93	85	76	79	78	86	89	89	80.1
Garber	Minimum	47	47	45	52	58	61	56	46	51	51	51	51	44	46	50	47	62	61	56	60	62	58	61	69	65	63	59	58	55	61	63	55.2
Harrisonville §	Maximum	79	67	71	79	82	83	75	65	75	82	65	58	70	74	75	82	86	81	82	82	81	92	92	79	79	80	72	81	88	86	78.2	
Jefferson City §	Minimum	45	45	40	52	52	51	57	59	52	51	50	50	45	47	54	50	52	61	57	62	61	62	64	66	63	64	63	56	58	62	64	54.7
Lamar §	Maximum	81	78	75	81	84	83	83	79	91	79	65	65	73	83	83	82	73	79	81	71	79	92	95	83	75	82	82	88	89	86	80.2	
Lebanon	Minimum	41	45	35	38	40	44	52	55	49	42	54	50	47	38	47	49	53	59	56	57	51	55	60	63	62	56	55	51	53	54	50.5	
Lexington §	Maximum	81	69	75	83	82	83	72	65	77	65	64	71	76	77	82	85	77	82	72	85	76	88	92	76	70	78	79	84	88	86	78.0	
Marshall	Minimum	50	47	44	49	52	56	61	52	46	52	48	48	42	48	50	51	59	55	62	64	62	61	64	71	65	64	61	62	60	64	56.2	
Mountain Grove	Maximum	79	68	71	81	82	84	76	64	75	81	66	62	70	75	75	82	87	79	79	84	81	82	91	91	80	80	81	73	82	87	85	75.5
Neosho	Minimum	45	45	41	53	56	61	57	50	51	48	50	44	48	52	49	56	61	56	59	62	59	61	68	67	63	63	63	55	58	58	58.0	
Nevada	Maximum	82	74	76	82	82	84	71	63	76	86	62	54	68	74	79	84	83	77	80	77	79	74	90	90	77	73	78	81	85	87	87	77.9
Sedalia	Minimum	47	48	45	52	52	59	59	51	52	55	51	48	45	48	52	52	55	62	58	59	62	60	63	67	65	65	60	59	57	57	55.8	
Springfield	Maximum	80	68	73	79	82	82	76	63	73	84	72	54	66	72	76	82	85	76	81	80	72	80	87	91	78	70	79	73	84	85	87	77.1
Warrensburg	Minimum	45	45	39	48	52	60	57	55	51	50	47	46	43	53	49	61	59	55	61	61	56	62	69	64	63	63	59	55	60	60	54.8	
Marshall	Maximum	84	73	76	84	84	85	73	62	77	69	68	74	77	79	85	89	83	83	79	89	82	93	96	77								







## CLIMATOLOGICAL DATA

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## MISSOURI SECTION

W. J. MOXOM  
ST. LOUIS, MO.

Vol. XLIII

JUNE 1939

No. 6

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## GENERAL SUMMARY

June was slightly warmer than normal. The greatest departure was in the northern division, which averaged  $1.7^{\circ}$  above normal. The highest temperature throughout the State was  $99^{\circ}$ , occurring at Unionville on the 7th, and at Kirksville and Sedalia on the 18th. From the 10th to the 13th was the most general cool period, with the temperature as low as  $41^{\circ}$  at Neosho on the 11th.

Precipitation for the State averaged above normal, but was rather unevenly distributed. The southeastern division averaged 90 per cent of the normal, southwestern 108 per cent, and the northern 165 per cent. In the northern division, heavy to excessive rains occurred at a number of stations, causing considerable crop damage. The greatest 24-hour rainfall was 6.00 inches at Moberly on 26-27th.

Temperature and moisture conditions were generally favorable, and corn made excellent growth. At the close of the month, wet soil in some areas had delayed cultivation, and the fields were quite weedy. A considerable portion of the crop had been laid by, and the early planted was beginning to tassel. During the last decade much wheat was cut, but the harvest in northern counties was delayed by heavy rains.

Meadows, pastures and ranges made good to excellent growth and furnished considerable feed. The second cutting of alfalfa in the southeastern counties was heavy, but over most of the State the weather was rather unfavorable for hay making.—H. C. G.

## TEMPERATURE

The monthly mean for the State, 84 stations reporting, was  $74.6^{\circ}$ , or  $1.0^{\circ}$  above normal. The highest monthly mean was  $77.8^{\circ}$  at Campbell and Sedalia, and the lowest monthly mean was  $72.0^{\circ}$  at Arcadia. The highest recorded was  $99^{\circ}$  at Unionville on the 7th, Kirksville and Sedalia on the 18th, and the lowest was  $41^{\circ}$  at Neosho on the 11th. The greatest daily range was  $39^{\circ}$  at Sedalia on the 5th, Licking (near) on the 6th, and Neosho on the 11th.

## PRECIPITATION

The average for the State, 145 stations reporting, was 5.64 inches, or 1.00 inch more than normal. The greatest local monthly amount was 13.09 inches at Moberly, and the least local monthly amount was 1.15 inches at Advance. The greatest amount in any twenty-four hours was 6.00 inches at Moberly on the 26-27th. The average number of days with 0.01 inch or more was 12.

## MISCELLANEOUS PHENOMENA

Flood.—In Grand River 21st to 28th.

Fog.—Dense, 14th, 23d, 27th, 29th.

Hail.—Light, 7th at Amity, Bethany, Maryville, St. Joseph; 10th at Kansas City Airport; 20th at Amity and Lawson. Moderate, 20th at Cameron, where young corn was riddled. Heavy, 8th at Warrenton; 10th ten miles south of Maryville; 20th at East Atchison and St. Joseph. (See special hailstorm notes).

Halos.—Solar, 2d, 7th, 9th, 14th, 15th, 20th, 23d, 24th, 25th, 28th, 29th; lunar, 1st, 4th, 9th, 24th, 27th, 28th.

Thunderstorms.—Local, 1st, 5th, 6th, 11th, 12th, 13th, 14th, 15th, 17th, 18th, 24th, 28th, 29th; more or less general, 2d, 7th, 8th, 9th, 10th, 19th, 20th, 21st, 22d, 25th, 26th, 27th. Tornadoes.—7th, 19th. (See special tornado notes).

Windstorms.—On 7th at Bethany and Linneus, where trees and branches were blown down; minor damage to telephone wires at Linneus. On the 10th at Columbia, Kansas City, St. (Continued on page 32)

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind			Relative humidity			Percentage of sunshine	
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12 noon		6:30 p. m.
Columbia.....	29.89	30.27	4	29.53	10	7.5	29	nw.	10	85	64	61	59
Kan. C. Airport.....	29.87	30.26	3	29.55	10	8.4	50	w.	11	84	57	54	63
St. Joseph.....	29.87	30.27	3	29.43	10	8.1	30	nw.	10	87	56	52	57
St. Louis.....	29.93	30.29	4	29.46	10	11.1	34	sw.	10	79	58	61	53
Springfield.....	29.94	30.24	4	29.59	10	8.0	24	s.	9	87	60	63	73
Cairo, Ill.....	29.95	30.26	4	29.62	10	7.0	32	sw.	9	87	66	67	69
Keokuk, Iowa..	29.90	30.28	4	29.46	10	7.1	24	w.	10	83	60	59	67

## COMPARATIVE DATA FOR JUNE

Year	Temperature			Precipitation				Number of days				
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy
1888.....	72.6	103	36	5.81	5.98	5.96	5.50	0	7	..	..	..
1889.....	70.7	100	38	4.66	4.29	4.57	5.13	0	6	..	..	..
1890.....	77.2	106	44	2.45	3.14	2.49	1.71	0	6	..	..	..
1891.....	73.2	103	46	6.56	5.61	7.99	6.08	0	13	..	..	..
1892.....	74.5	100	45	3.09	3.04	3.72	2.52	0	7	15	9	6
1893.....	72.6	98	40	4.72	4.92	3.91	5.32	0	9	12	12	6
1894.....	74.5	105	35	3.74	4.28	4.92	2.03	0	7	16	11	8
1895.....	73.3	100	42	5.87	6.07	6.33	5.20	0	10	12	11	7
1896.....	72.5	101	45	3.98	3.32	3.63	5.00	0	9	12	11	7
1897.....	73.6	102	38	6.25	6.49	5.74	6.51	0	12	9	14	5
1898.....	75.3	100	49	5.92	6.32	6.54	4.90	0	11	13	12	5
1899.....	74.3	103	42	3.52	3.71	4.83	3.21	0	9	15	10	5
1900.....	73.3	103	44	5.05	3.71	5.06	6.37	0	10	12	12	6
1901.....	77.9	106	40	2.02	2.67	1.47	1.92	0	6	18	10	2
1902.....	70.9	100	37	6.42	6.64	6.95	5.68	0	12	11	10	9
1903.....	67.3	95	36	3.28	2.96	3.78	3.09	0	9	15	9	6
1904.....	70.5	95	45	6.68	5.31	8.23	6.51	0	11	12	12	6
1905.....	75.2	103	42	3.14	2.84	3.06	3.52	0	7	15	10	5
1906.....	72.7	101	40	4.82	3.28	6.62	4.55	0	10	15	9	6
1907.....	71.2	97	40	5.47	5.76	6.40	4.24	0	11	14	10	6
1908.....	72.3	98	43	6.01	6.92	6.78	4.33	0	11	13	10	7
1909.....	73.9	98	48	5.23	5.96	5.78	3.95	0	11	11	13	6
1910.....	70.4	99	38	4.11	3.08	4.69	4.57	0	8	16	7	7
1911.....	78.9	112	43	1.76	0.93	1.59	2.77	0	6	18	8	4
1912.....	69.5	100	42	4.77	3.31	5.39	5.62	0	9	14	8	8
1913.....	75.4	107	33	2.55	3.01	2.31	2.32	0	6	18	8	4
1914.....	79.3	106	43	2.26	3.11	2.50	1.17	0	5	18	7	5
1915.....	70.8	98	38	6.45	7.53	7.24	4.57	0	12	11	10	9
1916.....	70.0	100	42	5.86	5.05	6.50	6.04	0	10	14	9	7
1917.....	70.0	103	35	3.67	5.72	2.20	3.10	0	8	19	7	4
1918.....	77.2	110	48	3.09	3.04	3.20	3.04	0	7	17	8	5
1919.....	75.0	104	44	5.58	5.04	6.24	5.47	0	11	14	10	6
1920.....	72.7	104	41	2.35	3.09	2.14	1.83	0	6	18	7	5
1921.....	76.6	105	44	5.81	4.74	7.74	4.96	0	12	12	10	8
1922.....	76.5	108	43	1.61	1.72	1.39	1.72	0	5	19	8	3
1923.....	73.5	103	45	5.56	5.30	6.52	4.87	0	11	14	9	7
1924.....	72.5	101	38	7.27	8.53	7.70	5.57	0	14	12	12	6
1925.....	76.5	103	46	5.99	7.68	4.99	5.31	0	9	15	10	5
1926.....	70.9	101	37	3.60	5.02	3.79	1.99	0	8	15	9	6
1927.....	70.3	99	41	5.81	5.38	6.77	5.28	0	10	15	7	8
1928.....	67.7	91	40	11.25	8.59	11.03	14.12	0	15	8	11	11
1929.....	71.3	99	39	5.69	6.57	5.98	4.52	0	10	16	8	6
1930.....	72.1	107	36	3.77	5.17	4.63	1.52	0	7	18	8	4
1931.....	75.1	107	40	2.75	4.09	1.81	2.35	0	6	19	8	3
1932.....	75.2	103	47	4.81	5.53	6.09	2.82	0	10	12	12	6
1933.....	73.4	107	38	1.47	2.89	0.92	0.61	0	3	22	6	2
1934.....	80.4	108	47	2.82	2.92	2.72	2.83	0	7	17	10	3
1935.....	69.6	98	39	8.95	6.73	11.06	9.07	0	15	9	12	9
1936.....	76.5	112	40	1.42	1.30	1.38	1.57	0	4	21	6	3
1937.....	74.4	105	43	4.93	3.43	5.79	5.56	0	10	14	10	6
1938.....	72.4	98	44	4.77	4.20	5.04	5.06	0	10	13	11	6
1939.....	74.6	99	41	5.64	7.70	5.38	3.83	0	12	11	13	6
Period.....	73.6	112	33	4.64	4.68	4.99	4.26	0	9	14	10	6



## Climatological Data for June 1939

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.					Precipitation, in inches					Number of days				Prevailing direction of wind	Observers		
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Length of record, years	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelted	With precip., .01 inch or more	Clear			Partly cloudy	Cloudy
Northern Division																					
Bethany	Harrison	916	44	73.4	+ 1.4	96	7	53	3†	31	46	9.44	+4.38	2.35	0	11	11	13	6	se.	A. S. Cumming
Brunswick	Chariton	652	58	74.7	+ 1.7	94	7†	56	4†	34	60	8.64	+3.53	3.17	0	14	14	4	12	se.	O. K. Benecke
Canton, Lock & Dam 20	Lewis	488	1	75.2	.....	93	16†	51	14	33	9	5.40	+0.62	1.28	0	11	9	10	11	sw.	Lockmaster
Chillicothe	Livingston	779	30	74.4	+ 2.1	96	7	53	4	34	83	11.36	+6.63	5.66	0	14	14	9	7	sw.	Wm. J. Olenhouse
Clifton Hill	Randolph	731	40	72.2	- 0.2	92	15	53	4	27	30	8.10	+3.71	2.70	0	12	15	11	4	s.	Dr. A. J. Bradsher
Columbia	Boone	740	49	75.0	+ 1.6	92	16	56	14	25	49	8.12	-1.64	1.05	0	10	5	14	11	s.	U. S. Weather Bureau
Conception	Nodaway	980	50	74.1	+ 2.6	95	16	50	3	31	55	8.96	+4.01	2.91	0	11	7	21	2	s.	Fr. Adelhelm Hess
Edgerton	Platte	856	19	74.0	+ 2.1	93	16	51	4	32	28	11.11	+6.24	2.31	0	12	15	1	14	s.	Fred L. Stiff
Elsberry	Lincoln	449	8	74.0	.....	95	18	49	4	38	8	4.01	.....	1.20	0	8	11	14	5	sw.	Ray E. Mills
Fayette	Howard	760	59	74.2 <sup>b</sup>	+ 1.4	92	17†	51	4	.....	56	10.17	+5.60	3.90	0	12	12 <sup>b</sup>	8 <sup>b</sup>	5 <sup>b</sup>	se.	Morrison Observatory
Fulton	Callaway	818	51	74.2	+ 1.0	93	16†	53	4	31	47	3.00	-1.40	0.80	0	13	17	10	3	se.	Clyde C. Herring
Grant City	Worth	1,184	35	72.9	+ 2.1	95	7	47	3	34	47	9.88	+4.88	3.69	0	9	8	17	5	se.	Howard Rybolt
Hannibal	Marion	759	47	73.0	+ 0.5	92	16†	53	14	28	55	7.39	+3.49	3.19	0	10	8	8	14	sw.	Hannibal Water Dept.
Kansas City Airport	Jackson	741	50	76.0	+ 2.4	96	16	57	4	29	50	10.99	+6.00	2.85	0	12	6	11	13	s.	U. S. Weather Bureau
Kansas City Univ.	Jackson	908	1	75.7	.....	95	7	54	4	32	1	9.93	.....	2.54	0	12	10	16	4	s.	University of Kansas City
Kidder	Caldwell	1,020	47	74.4	+ 2.6	95	16	51	3	31	51	8.53	+3.56	3.93	0	16	18	6	6	sw.	Mrs. Geraldine Terry
King City	Gentry	1,095	.....	.....	.....	.....	.....	.....	.....	13	6.92	+1.61	2.18	0	10	4	14	12	sw.	John M. Martin	
Kirkville	Adair	969	50	73.2	+ 1.5	99	18	51	4	29	57	7.53	+2.47	3.31	0	12	11	13	6	sw.	Charles Noble
Lawson	Ray	1,070	1	73.4	.....	91	16†	55	3	25	1	9.72	.....	3.47	0	14	9	20	1	se.	Elmer E. Lamb
Linn	Linn	816	.....	.....	.....	.....	.....	.....	.....	7	9.60	.....	2.98	0	15	10	14	6	sw.	H. D. Taggart	
Louisiana	Pike	469	45	73.1	+ 1.0	95	18	46	4	34	58	6.02	+1.79	1.15	0	11	10	19	1	w.	Stark Bro's Nurseries
Macon	Macon	875	40	73.2	+ 0.8	94	18	52	4	32	46	8.60	+3.88	2.39	0	13	13	12	5	sw.	Mrs. W. C. Brown
Maryville	Nodaway	1,169	49	73.0	+ 3.2	95	16	50	3	29	45	7.74	+2.63	2.55	0	13	9	10	11	se.	R. B. Montgomery
Mcphie	Scotland	787	0	73.4	.....	95	16	50	3	30	9	7.09	+1.96	1.46	0	14	6	4	20	sw.	John W. Alexander
Mexico	Audrain	800	50	74.2	+ 1.0	95	16†	53	12†	33	61	7.91	+3.17	2.25	0	15	.....	.....	.....	sw.	Mrs. Abbie Snoddy
Moebly	Randolph	875	2	73.8	.....	93	17†	50	4	30	2	13.09	.....	6.00	0	14	16	8	6	w.	McCormick Hospital
Oregon	Holt	1,048	83	75.1	+ 2.9	97	7†	51	3	31	83	7.19	+1.82	2.93	0	13	15	14	1	se.	Miss Mina Wright
St. Charles	St. Charles	520	51	76.4	+ 2.5	97	18	56	14	32	61	5.10	+1.10	0.95	0	13	20	8	2	s.	Martin L. Comann
St. Joseph	Buchanan	957	29	75.1	+ 1.4	97	15	57	3	27	67	7.52	+2.57	2.37	0	16	8	18	4	s.	U. S. Weather Bureau
Steffenville	Lewis	650	41	73.4	+ 0.8	93	18	52	4	29	46	6.66	+2.12	2.02	0	9	14	13	3	s.	Frank Hall
Tarkio	Atchison	916	36	72.6	+ 0.8	95	7†	50	3	33	45	6.81	+1.85	2.06	0	13	6	18	6	sw.	Albert Volker
Trenton	Grundy	822	43	74.4	+ 2.2	94	16	53	4	33	44	10.35	+5.31	3.32	0	14	10	14	6	s.	W. H. Estes
Unionville	Putnam	1,062	46	74.6	+ 3.3	99	7	52	3†	38	46	8.03	+2.84	1.80	0	13	19	3	8	sw.	John H. Schick
Warrenton	Warren	816	57	74.6	+ 1.2	93	18	53	4†	32	49	8.09	+4.31	3.32	0	10	2	21	7	sw.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.	574	67	74.0	+ 1.5	93	18	54	14	27	67	4.12	+0.29	1.25	0	13	10	7	13	s.	U. S. Weather Bureau
Division means and extremes		.....	.....	74.1	+ 1.7	99	7†	46	4	38	.....	7.70	+3.02	6.00	0	12	11	12	7	sw.	.....
Southeastern Division																					
Appleton City	St. Clair	813	44	75.2	+ 0.8	94	18	51	4	31	47	2.70	-2.32	1.18	0	12	18	6	6	sw.	Rolla Brown
Bolivar	Polk	1,071	36	74.6	+ 1.8	91	15†	53	11	26	44	3.65	-1.66	1.18	0	17	6	19	5	sw.	Southwest Baptist College
Boonville	Cooper	650	1	74.2	.....	92	15†	56	4	30	62	5.44	+0.39	2.26	0	14	13	9	8	se.	Boonville Water Dept.
Clinton	Henry	786	46	75.0	+ 1.2	93	15	51	11	30	52	5.64	+0.74	1.42	0	14	.....	.....	.....	.....	U. S. Weather Bureau
Dean II	McDonald	1,000	35	73.6	+ 0.9	91	15†	46	4	38	40	9.20	+3.27	1.62	0	13	13	12	5	se.	E. S. Taylor
Eldon	Miller	934	44	74.2	+ 1.2	92	18	52	4	32	40	6.20	+2.16	1.17	0	15	4	11	15	sw.	E. H. Shepherd
Garber	Taney	950	5	74.2	.....	95	15†	48	4	34	5	6.75	.....	1.52	0	15	4	12	14	e.	William H. Durham
Harrisonville	Cass	904	61	74.0	+ 0.9	92	16†	53	3	28	64	7.88	+3.09	2.23	0	14	6	7	17	se.	John H. Patterson
Jefferson City	Cole	557	49	72.8	- 1.0	91	17†	53	4	32	57	4.43	+0.20	0.90	0	11	13	14	3	s.	Mrs. Frank Kliegel
Lakeside	Miller	595	8	75.4	.....	94	16†	50	4	33	8	5.20	.....	1.15	0	10	.....	.....	.....	sw.	W. S. Frame
Lamar	Barton	980	51	75.8	+ 1.6	93	16	58	4†	29	58	3.16	-2.38	0.80	0	7	12	9	9	sw.	Jesse A. Mann
Lebanon	Laclede	1,265	51	73.0	+ 0.3	91	16†	49	4	32	52	3.94	-1.23	1.02	0	14	5	18	7	s.	Mrs. Rosa E. Montetius
Lexington	Lafayette	688	54	76.1	+ 3.2	95	17	55	5	35	55	6.78	+2.23	2.31	0	16	15	12	3	se.	Miss Carrie Loomis
Lockwood	Dade	1,078	33	75.4	+ 1.8	92	16	52	11	30	43	6.81	+1.13	1.72	0	14	11	16	3	sw.	Hubert A. Nieman
Marshall	Saline	779	52	75.0	+ 1.8	93	16†	55	4†	31	49	4.42	-0.38	1.33	0	12	12	16	2	se.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	38	73.2	+ 1.4	89	17†	52	4†	26	42	3.44	-1.50	1.01	0	12	6	22	2	se.	Mo. Fruit Exp. Station
Mount Vernon	Lawrence	1,174	27	74.1	+ 0.8	91	16†	52	11	29	39	8.24	+2.98	3.65	0	11	1	29	0	sw.	G. H. Boswell
Neosho	Newton	1,011	52	74.9	+ 1.1	90	15†	41	11	39	56	5.50	-0.47	1.06	0	13	16	7	7	sw.	U. S. Fisheries Station
Nevada	Vernon	862	46	76.1	+ 2.6	94	17	54	4†	30	47	4.11	-1.34	1.21	0	13	12	14	4	.....	Henry Kraft
Sedalia	Pettis	910	26	77.8	+ 3.6	99	18	54	11	39	28	5.38	+0.10	1.22	0	12	17	9	4	sw.	Dr. J. E. Cannaday
Seligman	Barry	1,542	38	73.0 <sup>b</sup>	+ 0.6	87	15†	50	11	31	36	7.02	+2.07	1.40	0	13	8 <sup>b</sup>	15 <sup>b</sup>	5 <sup>b</sup>	w.	Floyd E. Fawver
Seymour (near)	Webster	1,642	33	72.2	+ 0.5	87	16†	51	11	29	33	4.13	-1.21	1.40	0	17	7	18	5	s.	A. L. Hailey
Springfield	Greene	1,301	51	74.4	+ 1.9	93	16	53	4	26	51	3.68	-1.00	0.94	0	14	7	17	6	s.	U. S. Weather Bureau
Versailles	Morgan	1,037	12	74.2	- 0.5	91	16†	52	4	26	15	4.80	-0.03	1.03	0	12	13	12	5	se.	J. M. Wilson
Warrensburg	Johnson	878	52	75.3	+ 1.4	94	16†	54	11	29	59	5.21	+0.18	1.62	0	10	15	7	8	se.	E. A. Markey
Warsaw	Benton	687	38	75.4	+ 1.6	94	16	50	4	33	44	4.12	-1.18	0.80	0	15	17	9	4	se.	Everett Martin
Division means and extremes		.....	.....	74.6	+ 1.3	99	18	41	11	39	.....	5.38	+0.39	3.65	0	13	11	13	6	sw.	.....
Southeastern Division																					
Advance	Stoddard	354	2	76.2	.....																



Continued on next page

Stations	Drainage-basins	Day of month																														Total			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		..		
Northern Division																																			
Amity <sup>2</sup>	Grand		.10	.78					.25	1.03	.63	.01	T.	.08	.10	.14	.02			.54	1.08	2.27	.90				.15	.08	T.		T.	T.		8.11	
Bethany	do		.39						.93	1.46	.51									1.50	.06	2.29					.60	.90					9.44		
Bowling Green <sup>2</sup>	Mississippi								.39	.42	.27	.12		.13	.02					.24	1.12	1.55	.02						1.04	.02			5.34		
Brunswick <sup>2</sup>	Grand						.07		.63	.17	.75	1.42		.03						.33	1.22	1.17	.22					.25	.23		.07	.08	8.64		
Canton, Lock No. 20 <sup>2</sup>	Mississippi								.52	.11	.28	.58		.31	.11		T.			T.	.68	.90	.84						.25	.23			5.40		
Centralia <sup>2</sup>	do								1.15	.26	.23	.90								T.	1.21	1.00	.13						2.00		.27		7.02		
Chillicothe <sup>2</sup>	Grand		.21	.13					.69	.34	.61	.59		.03			T.			.13	.99	5.66	.37					.14	.13	.05	.43		11.36		
Clifton Hill	Chariton		.20						.67	.17	1.08									.84	.70	.80						.44	.87		.04		8.10		
Columbia <sup>1</sup>	Missouri		T.					T.	.01	.26	1.00		.04	.01		.15				.66	1.05	.01						.05	T.		.03		3.12		
Conception	do		.06						.86	1.32	1.48	.03		.13						.62	1.17	.21						.31					8.96		
Edgerton	Missouri		1.82			T.			.48	.73	1.43		T.	.53	.04					T.	1.31	1.32	.91	.42			T.	1.94	.03		.01		11.11		
Edina <sup>2</sup>	Mississippi			.89					.30	T.	.38	.24		.53	.45					.79	1.58	.65	.22				T.	1.29					7.32		
Elsberry	do		.10						.15	.15	1.01		.35	T.						.25	1.20	.80	T.				T.						4.01		
Farber <sup>2</sup>	do								.72	.59		.80								.47	2.32	1.82	.34					T.					6.73		
Fayette	Missouri		T.						.44	.14	.79		.03	.02						3.90	1.60	.88					.28	.70	1.37		.02		10.17		
Fulton <sup>2</sup>	do		.02						.03	.53	.73	.03	.40	.06						.10	.80	.19	.08					.02	.01		T.		3.00		
Gallatin <sup>2</sup>	Grand								.96	.70	.76	.10			.20					.24															
Gorli	Mississippi		.15	.12					.22	T.	.78			.67						1.06	1.66	1.54	.44				T.	.30	.26		.28		7.85		
Grant City	Grand		.19					1.25	T.	1.73	1.30			.11						1.00	T.	.83	.69	.23				.38		.48	.22		7.10		
Hamibal <sup>2</sup>	Mississippi								.52	.20	.21	.32			.07					.46	3.19	.20	.00	.26									9.88		
Hermann <sup>2</sup>	Missouri								.43	.10	.55	.10	.25	.54						.13	.03	1.90	.12					.03		.16			7.39		
Kahoka <sup>2</sup>	Mississippi			.12					.26		.22	.44		.32						.35	3.25	.52	T.										5.18		
Kansas City Airport <sup>2</sup>	Missouri		.05	1.46		T.	T.		.14	.21	2.85	T.	.07	.14						.97	2.23	.67	T.			T.	2.17	T.	.03				6.38		
Kansas City University	do		.04	.72					T.	2.51	T.	.04	.18							.26	1.04	1.53	T.			T.	2.54	.01	.05	.01			10.99		
Kidder <sup>2</sup>	Grand		.03	.09					.26	.66	.80	.03		T.	.12	.10				.24	1.12	3.93	T.	.29				.13	.31				9.93		
King City	Missouri		.57						.44	1.12	.87			T.	.12					1.76	.09	2.09	T.					.24	T.				5.53		
Kirksville	Mississippi		.22						.20	.04	.44			.62						1.76	.09	2.09	T.					.24	T.				6.92		
LaBelle <sup>2</sup>	do		.44						.38		.12	.72		.64						1.31	.82	.69	.22						.12	.17	.02	.03	7.53		
Lawson	Missouri		.98	.78					.16	.86	1.78		.01	.33						.58	2.47	1.27	.08					.15	T.		.07		6.84		
Linneus <sup>2</sup>	Grand		.02						.88	.21	.71	1.03		.96	.04			T.		.28	1.45	2.98	.47					.20	.15	T.			9.72		
Louisiana	Mississippi		.25						.30	.60	.35			.70						1.10	1.15	.25					.70		.02	.40	.14	.01	9.60		
Lucerne <sup>2</sup>	Grand								.41	.69	.27	.09		.70	.49					.26	.95	.91	.25						.08	.18	.04	.30	5.62		
Macon <sup>2</sup>	Chariton		.78						.20	.06	.72	.60		.32	.14					.35	.02	.39	.18						.65	.65			8.60		
Madison <sup>2</sup>	Mississippi		.03						.76	.15	.25	.53		.29						.09	3.71	2.46	.28						.52	3.75			12.87		
Maryville	Missouri		.16				1.21	.04	.68	1.18			.01	.05						.99	.04	2.55	.49					.41	T.				7.74		
Memphis <sup>2</sup>	Mississippi		.20						.24	.06	.26	.22		.35	.28					.09	3.71	2.46	.28										7.09		
Mexico <sup>2</sup>	do								.25	.48	.85	.25		.02	.07	.14	.07	.01	.06	1.46	1.04	.94	.51					.06	.91		.56		7.91		
Millan <sup>2</sup>	Grand								.88	.36	.47	.09		1.12	.45					.41	2.26	2.60	.48						.85	.58		.33	.08	9.96	
Moberly	Mississippi		.06	.05				1.04	.13	.86			.35							1.60	.40	2.35						.10		6.00			13.09		
Monroe City	do								.44	.17	.68									1.31	.94	3.12								.77			7.46		
Oregon	Missouri		.12						.03	.75	.90			.42	.04	.16				1.07	.38	2.55	.01					.64					7.19		
Palmyra <sup>2</sup>	Mississippi								.20	.11	.26	.48		T.	.11					.09	2.41	.73	.11										5.94		
Paris <sup>2</sup>	do								.45	.17	.32	.46		T.	.05					.03	2.25	.70	.12										6.57		
Perry <sup>2</sup>	do								.45	.22		.65		T.	.05					.09	2.41	.73	.11						1.14	T.			6.87		
Philadelphia <sup>2</sup>	do								.42	.17	.21	.55		.18	.18					.36	.51	.38	.38						.14				5.37		
St. Charles <sup>2</sup>	Missouri							17	.20	.95	.15	.86		.18	.18					.60	.55	.89	.31						.15				5.10		
St. Joseph <sup>1</sup>	do		.05	.39				24	.18	.39	.81		T.	.50	T.	.02				.60	.55	.89	.31						.03				7.52		
Saverton, Lock No. 22 <sup>2</sup>	Mississippi			.18				10	.47	.17	.31	.44	T.	.06	T.					.92	2.57	1.81	.43						.04		.12		8.61		
Shelbina	do		.25						.35		.68			.18						2.38	1.83	1.62						1.68		.43			9.40		
Shelbyville <sup>2</sup>	do								.55		.60	.35		.12						.22	3.24	.76	.38						.93		.08		8.23		
Steffenville	do		.12						.38	.05	1.12			.47						1.30	.65	.02							.55				6.66		
Tarkio	Missouri		.46					15	.34	.37	1.38			.16						.12	.31	1.98						.47	.59		.04	.11	10.35		
Trenton	Grand		.01	.10			T.	1.39	.40	.03	.48			3.32		T.				.70	.30	1.85	.06						T.	.50			6.81		
Troy <sup>2</sup>	Mississippi								.42	.10	.65	.35	.21	.33						.40	1.80	1.40	.72						.23	.26			5.47		
Unionville <sup>2</sup>	Chariton								.60	.72	.60			.42	.66					.42	1.17	1.45	.05						.10				8.03		
Warrenton	Mississippi			T.	T.				.34	.01	.30	.64	.02	T.	.10					.42	1.17	1.45	.05						.10				8.09		
Keokuk, Iowa <sup>1</sup>	do		T																	.96	.59	.74	.01					.03	.39	T.			4.42		
Southeastern Division																																			
Altona <sup>2</sup>	Osage		.90	.55			.38		1.25	.90		.41	.03							1.08	.15							2.00	.37		.10	.40	8.52		
Appleton City	do		.19			.10			.03	1.15	.03	.28		.01						.03	T.								.06	.63	.01	.13	.06	T.	2.70
Bolivar	do		.09	.19	.21		.03		T.	.38	.05	.84		.01						.04	.01	.05	.49						.12	1.06				3.65	
Boonville <sup>2</sup>	Missouri							14	.26	.92	.56	.08	.04							.58	.60	.07								.15	.30	.03	.03	5.44	
Buffalo <sup>2</sup>	Osage								.24	.04		.71	.11							.09			.74											3.36	
Caplinger Mills	do		.03	.14			.28		T.	.90		.82								T.	T.														



## Daily Precipitation for June 1939—Continued from preceding page

Stations	Drainage basins	Day of month																														Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		..
Southeastern Division—Concluded																																	
Bragg City <sup>2</sup>	St. Francis		T.	1.22	T.		.60		T.	1.00			.25							T.	T.			.57			T.	.19		.15		3.98	
Campbell	do	.07	.15	.01		.82	.03			.08			.28	.01					.12		.08			.37		.23	.11	T.	.09	.10		2.50	
Cape Girardeau <sup>2</sup>	Mississippi	.25	.01				.12	.45		.58	.16	.32		.08							.07	.55	.25		.17					.04		3.65	
Caruthersville <sup>2</sup>	do		.05	.06			.48			1.09	.50	.17		.46						.05	.12				1.37				.20	.10	.05	4.70	
Centerville <sup>2</sup>	Black			.25					.06	.48		.46	.14	.46								.40		.48	.10			.60	.76	.10	.55	.15	4.99
Crystal City <sup>2</sup>	Mississippi	T.		.14					1.21	.99	.24	.12		.39							1.12	.51	.73					.02	1.02	.14	.06	6.70	
Cuba <sup>2</sup>	Meramec			.75				.20		.91			.48	.25								.76	.91					.23	.65			5.14	
Dexter <sup>2</sup>	St. Francis		.03	.31			.65			.64	.48									.72	.12									3.07	.10	6.12	
Doulihan <sup>2</sup>	Black		.02					.02	.03				.38											.30			.51	.02	.10	.05	.02	1.45	
Farmington <sup>2</sup>	St. Francis					T.	.20	.40	.02	.44			.61								.17	.25		.19				1.36	.34		.09	4.07	
Fisk <sup>2</sup>	do	T.	T.							.16	.22			T.	.07						.37				T.				1.21	T.		2.03	
Fredericktown <sup>2</sup>	do			T.				.18	.67	.37			.55		.50							1.11	.43	.07					1.61	.37	.95	.10	6.91
Goodland <sup>2</sup>	Black							.39	1.43	.37		.20		.85								.40		.11			.20	.51	.08	.22		5.89	
Greenville <sup>2</sup>	St. Francis		.30						.15		.45		.45						.07			.66		.26		.09			.26	.27		2.96	
Jackson <sup>2</sup>	Mississippi	.20				.09	.05			.37	.37		.18									.14	.78		.07				.19		.43	2.87	
Jerome <sup>2</sup>	Gasconade										.15	.85	.10	.55										.65				1.55				3.85	
Koshkonong <sup>2</sup>	Black		T.		T.	.13	T.	.04	T.	T.	.04		.40	T.					T.		T.	T.	.09		T.		.88	T.	.84	.12	.21	3.20	
Leeper <sup>2</sup>	do			.25	T.		.15			.20	.10	.45		.45								.40		.10	.15				1.30	T.	.80	.10	4.45
Licking (near)	Gasconade								1.80		.15		1.25									.34	.04	.27	.26		.01	.13		.10		4.35	
Marble Hill <sup>2</sup>	Mississippi	.05							.80				.15	.25								.10	.15	.50					.10	.25	.45	2.80	
Meramec Park <sup>2</sup>	Meramec			.22						.70			.44	.18	.18							.08	.49	.94					.34		.08	3.65	
Morehouse <sup>2</sup>	Mississippi	.08	.52	T.		.04	.01			.58			.18	.27	T.					.23	.15			.11						.30		2.47	
New Madrid <sup>2</sup>	do	.07	.02	.78	1.04		.08	.04	T.	1.34	.53	.02		.54						.09	.01		T.		.54				.18	T.	.14	5.42	
Owensville <sup>2</sup>	Gasconade									2.12	.12																		.56		.20	3.00	
Pacific <sup>2</sup>	Meramec								.63	.72	.14		.62	T.									.25	.17			T.		.10	.59		3.22	
Parma <sup>2</sup>	St. Francis			.32						.57	.27			.28											.61				.34		.05	2.05	
Poplar Bluff <sup>2</sup>	Black			.80			T.			.29	.38			.40	.02					.68	T.				T.	.14					.08	3.13	
Richwoods <sup>2</sup>	Meramec			.02						1.09	.15			.30								.19	.120								.05	3.00	
Rolla <sup>2</sup>	do			.39					.76	T.	.43		.66	.01								.05	.40	.02	.36		.81			.07		3.96	
St. Louis <sup>1</sup>	Mississippi	T.	T.					.10	.31	.17	.74		.21	.10			T.					.33	1.07	.18	.01				.02			3.24	
St. Louis Airport <sup>1</sup>	Missouri	T.	T.	T.					.50	.72	.86		.35	.03								.15	1.42	.64	.07				T.	.01	T.	4.75	
St. Louis University <sup>2</sup>	Mississippi		.11					.02	.39	.21	.50		.33	.05								.31	1.03	.26	.03				.03			3.27	
Salem <sup>2</sup>	Meramec								.87	.63	.83	.10	.77									.81	.08	.45	.10			1.24	.09		.20	.18	6.35
Sikeston <sup>2</sup>	Mississippi	.10	.10	T.		T.	.05		.05	.35	.17		.22						T.	T.	T.				.10			T.	.82	T.	.33	2.29	
Union <sup>2</sup>	Meramec			.10					.30	.32	.77		.34									1.45	.46	.07				1.45		.02		5.28	
Valley Park <sup>2</sup>	do			.17					T.	.35	.11	.19	.72	T.	.28							.10	.29	1.64	.39				.71	.02	T.	4.97	
Van Buren <sup>2</sup>	Black			T.					T.	.08		.06		.30					T.					.24			.89		.22		.77	2.56	
Wappapello Dam <sup>2</sup>	St. Francis	.02		.12			.01			.07	.02		.01	.35	T.					.23	.05		.08	T.	.06				.39		.04	1.45	
Washington Univ. <sup>2</sup>	Mississippi			.01				.03	.23	.28	.10	.57	.04	.32							.20	.27	1.04	.29			.32		.01			3.39	
West Plains <sup>2</sup>	Black		T.	.13			.08	T.	.01	T.	.01		.40	.03						T.		.09	.28	.01	.29	T.			1.86	.02	.31	3.84	
Williamsville <sup>2</sup>	do	.02		.07	.01					.20	.02			.40							.89		.06	.06						.02	T.	.25	2.35
Willow Sprgs (near) <sup>2</sup>	White			.03				.42		.02	.05		.32	.25	.16						.05	.70		.65	.15		.05	.18	.50		.95	6.13	
Zalma (near) <sup>2</sup>	Mississippi	T.								.36	T.	.29		.24								.02	.40	T.	.08	T.				.73	T.	.03	2.15
Cairo, Ill. <sup>1</sup>	do	.07	.08	T.		T.	T.		.54	.11	.49		.12	T.					.23	.37	.04	T.	T.	.36					.01		.02	2.56	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation.

<sup>1</sup> First-order Weather Bureau station; precipitation is for the 24-hour period, midnight to midnight, unless otherwise indicated. <sup>2</sup> Precipitation is measured in the morning; amount then recorded is for the preceding 24 hours. <sup>3</sup> Precipitation is for 24-hour period, midnight to midnight. <sup>4</sup> Precipitation measured with recording gage. <sup>5</sup> Included in next measurement. T. Trace, or precipitation less than 0.01 inch. <sup>6</sup> Estimated. <sup>7</sup> Partially estimated. <sup>8</sup> Incomplete.

NOTE:—In addition to the stations shown on daily temperature page, records of daily temperatures are kept at the following stations in Missouri: Advance, Appleton City, Bethany, Bolivar, Boonville, Campbell, Canton Lock No. 20, Clifton Hill, Columbia Airport, Conception, Dean, Edgerton, Elsberry, Fulton, Goodland, Greenville, Kansas City University, Kidder, Kirksville Airport, Koshkonong, Lakeside, Licking (near), Lockwood, Marble Hill, Memphis, Mount Vernon, St. Joseph Airport, St. Louis Airport, St. Louis University, Saverton Lock No. 22, Seligman, Seymour (near), Springfield Airport, Steffenville, Tarkio, Versailles, Wappapello Dam, Warsaw, and Washington University.

## Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for June 1939

(See precipitation data in daily precipitation table)

Station	Data	Day of month																														Monthly	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		..
Columbia.....	{ Evaporation .....	.231	.148	.159	.236	.219	.199	.208	.236	.112	.109	.161	.105	.049	.061	.122	.227	.267	.199	.256	.027	.114	.187	.219	.190	.231	.086	.152	.112	.151	.091	....	4.814
	{ Mean temperature ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
	{ Wind movement ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lakeside .....	{ Evaporation .....	.293	.222	.303	.290	.284	.242	.262	.349	.252	...	.343	.294	.124	.147	.132	.333	.366	.277	.352	.265	.322	.359	.301	.268	.244	.123	.224	.271	.148	.262	...	7.916
	{ Mean temperature ..	.74	.74	.70	.66	.72	.76	.81	.80	.76	.72	.67	.66	.70	.68	.78	.84	.81	.82	.80	.81	.78	.76	.75	.76	.74	.79	.78	.75	.76	.74	...	75.4
	{ Wind movement ..	.23	.15	.55	.31	.30	.51	.54	.58	.52	.54	.145	.42	.33	.18	.44	.58	.43	.20	.51	.51	.28	.65	.39	.9	.18	.34	.30	.29	.14	.35	...	1,229
St. Louis .....	{ Evaporation .....	.222	.080	.166	.272	.182	.218	.194	.220	.162	.154	.215	.146	.064	.051	.175	.208	.295	.156	.283	.061	.114	.258	.194	.234	.182	.188	.132	.226	.230	.250	...	5.527
	{ Mean temperature ..	.74	.76	.74	.70	.72	.79	.82	.78	.74	.73	.66	.66	.65	.68	.78	.82	.80	.83	.80	.78	.79	.76	.75	.75	.78	.79	.80	.82	.76	...	75.8	
	{ Wind movement ..	.16	.25	.43	.29	.33	.41	.31	.53	.24	.25	.59	.28	.28	.14	.41	.31	.47	.32	.40	.23	.16	.38	.36	.17	.26	.17	.26	.17	.34	.19	.28	...



Daily Temperatures for June 1939

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	..	Mean		
Northern Division																																		
Brutuswick §§	Maximum	88	89	79	85	89	86	94	87	80	69	70	76	75	80	93	94	94	93	82	85	85	83	88	88	81	88	86	85	85	82	..	84.6	
Chillicothe §§	Maximum	67	67	57	56	56	61	70	66	65	64	59	59	61	60	59	71	72	73	69	68	66	67	63	63	68	70	68	68	67	64	..	64.8	
Columbia	Maximum	66	67	55	53	59	67	73	64	63	63	56	57	61	59	60	71	72	72	66	65	65	63	62	66	69	69	67	68	65	62	..	64.1	
	Minimum	84	87	77	80	85	87	90	87	84	73	74	70	73	78	92	92	91	92	83	84	87	84	88	88	79	88	85	87	83	82	..	83.8	
Fayette	Maximum	67	70	60	57	61	70	72	67	64	62	59	60	59	56	70	73	72	73	71	67	68	69	67	69	68	68	71	69	63	..	66.2		
	Minimum	85	..	..	86	85	86	90	86	81	76	72	71	74	78	91	91	92	92	85	84	85	82	88	86	80	87	84	81	80	82	..	b3,7.7	
Grant City	Maximum	66	..	..	51	59	68	70	65	63	62	57	59	59	56	69	73	72	72	68	67	66	62	64	68	67	67	68	67	63	..	b4.8		
	Minimum	91	83	79	85	89	88	95	85	78	75	68	75	73	80	87	93	91	92	81	81	77	81	86	85	81	82	86	85	85	81	..	83.3	
Hannibal	Maximum	64	65	47	53	59	70	61	62	60	56	53	53	59	58	68	75	72	73	65	64	63	61	59	65	66	69	64	66	66	59	..	62.5	
	Minimum	84	85	83	81	85	86	87	87	82	76	67	67	67	75	88	92	89	92	88	79	86	80	85	83	81	80	81	88	82	77	..	82.1	
Kansas City Airport	Maximum	65	67	58	55	57	65	71	64	64	63	55	58	56	53	66	71	69	69	66	67	65	68	62	63	64	67	67	69	66	61	..	63.8	
	Minimum	79	86	79	84	88	87	94	89	83	74	69	73	77	81	95	96	95	93	82	86	79	83	92	89	88	84	88	87	86	84	..	85.5	
Kirksville	Maximum	79	85	58	57	68	71	73	66	65	59	58	60	61	63	72	77	75	72	66	63	68	65	63	70	65	72	68	71	71	67	..	66.6	
	Minimum	86	87	76	80	86	83	91	88	84	78	68	75	65	78	87	91	92	99	85	80	80	79	84	85	83	86	84	85	85	82	..	83.1	
Lawson	Maximum	64	65	51	57	61	64	69	61	63	63	54	56	57	53	68	74	70	72	64	65	66	64	58	65	67	69	67	65	60	..	63.8		
	Minimum	89	83	76	81	85	84	90	86	82	72	67	73	75	80	90	91	90	91	82	83	79	80	86	86	83	81	87	85	83	81	..	82.7	
Louisiana	Maximum	65	66	56	56	61	68	70	66	62	59	56	57	59	60	69	75	70	73	66	64	67	61	64	64	66	71	64	61	68	61	..	64.2	
	Minimum	80	89	80	80	85	85	92	87	80	75	72	70	65	75	90	94	90	95	83	80	80	89	83	88	85	89	85	85	80	..	83.0		
Macon §§	Maximum	85	87	78	80	86	86	92	85	81	66	74	71	66	79	91	93	92	91	81	82	85	82	88	87	81	88	85	88	87	82	..	83.2	
	Minimum	64	65	55	52	56	68	71	62	61	56	53	55	58	55	59	71	69	70	65	64	65	65	61	64	66	68	67	69	64	60	..	63.0	
Maryville	Maximum	88	81	76	82	86	87	94	82	78	76	68	74	74	80	85	95	91	91	87	80	79	79	86	84	83	81	86	86	86	81	..	82.9	
	Minimum	64	65	50	56	59	69	65	63	61	56	53	53	69	81	92	95	92	95	82	84	87	84	87	89	81	90	85	90	85	85	..	84.8	
Mexleo §§	Maximum	85	90	72	80	90	90	93	85	83	76	73	73	69	81	92	95	92	92	95	82	84	87	84	87	89	81	90	85	90	85	85	..	84.8
	Minimum	65	66	58	59	59	69	71	64	63	63	56	53	59	53	59	72	70	71	68	67	65	68	60	61	66	61	66	70	65	61	..	63.7	
Moberly	Maximum	82	85	79	80	88	86	92	89	84	80	69	71	70	78	92	92	93	93	89	82	82	81	85	90	80	89	82	84	85	81	..	83.9	
	Minimum	64	65	55	50	59	68	76	61	63	62	56	57	59	60	70	75	71	75	65	65	63	60	60	67	64	70	65	67	65	60	..	83.8	
Oregon	Maximum	93	80	79	87	91	92	97	89	82	78	73	75	78	85	93	97	95	95	87	82	80	83	91	88	87	85	89	90	88	85	..	86.5	
	Minimum	62	66	51	56	63	70	72	62	60	57	55	57	59	60	70	75	71	75	65	65	63	60	60	67	64	70	65	67	65	60	..	83.8	
St. Charles §§	Maximum	80	92	82	85	89	90	90	86	88	81	77	69	71	80	95	95	90	97	85	80	91	88	89	91	85	94	95	92	89	86	..	86.7	
	Minimum	68	66	67	57	57	70	72	66	64	65	59	59	59	56	66	71	71	71	74	70	69	69	64	65	67	67	67	70	71	68	..	86.2	
St. Joseph	Maximum	90	82	74	84	88	89	95	86	81	71	69	76	76	84	97	96	95	94	83	82	80	82	89	87	88	83	88	89	86	83	..	85.0	
	Minimum	68	64	57	57	64	71	68	67	64	58	57	58	61	62	71	77	74	68	64	64	66	63	63	70	65	70	66	68	65	65	..	85.2	
Trenton	Maximum	87	86	87	83	90	88	93	89	81	79	72	73	72	82	92	94	91	91	89	80	79	80	89	89	85	86	88	90	88	86	..	85.3	
	Minimum	65	67	54	53	58	58	72	62	63	60	54	58	57	57	68	78	73	66	72	73	66	68	64	60	61	62	68	64	62	..	83.6		
Unionville §§	Maximum	90	95	82	85	90	89	99	98	82	70	73	80	66	79	90	98	98	93	87	87	87	81	84	91	91	81	89	88	89	86	..	86.8	
	Minimum	64	65	52	54	58	67	72	60	64	62	53	55	58	52	58	71	71	71	64	65	64	61	59	64	66	67	67	67	65	60	..	85.2	
Warrenton	Maximum	84	88	86	82	87	89	91	88	82	82	73	71	70	79	92	91	90	93	92	83	87	87	85	87	87	87	87	87	84	81	..	86.0	
	Minimum	64	65	62	53	55	67	70	63	63	63	56	57	59	53	64	71	70	70	69	69	67	68	62	62	63	65	66	70	69	64	..	84.0	
Keokuk, Iowa	Maximum	83	88	76	81	85	88	91	85	79	70	71	67	67	77	89	93	93	93	78	80	84	80	88	87	84	87	81	88	86	80	..	82.8	
	Minimum	67	68	60	59	61	71	67	67	65	56	55	60	55	61	69	75	73	66	66	67	69	69	64	69	68	70	69	68	63	..	65.3		
Southwestern Division																																		
Clinton	Maximum	86	87	80	82	87	85	91	90	85	84	74	74	80	82	93	93	93	89	89	86	85	90	91	89	88	88	84						



*Continued from page 27*

Charles, St. Louis, Sedalia, with only minor damage to trees and wires, except at Kansas City, where the damage was widespread to trees, windows and power and communication lines. On the 18th a severe straight-line wind killed one person and caused property loss estimated at \$10,000, and loss to crops estimated at \$20,000 three miles northwest of Tarkio. On the afternoon of the 20th a severe wind, hail, and rain storm struck the vicinity of East Atchison to Cameron, having moved out of Kansas, resulting in severe damage to wires, roofs, windows, trees, fruit, and crops. (See special hailstorm notes).

#### HAILSTORMS

A heavy hailstorm occurred ten miles south of Maryville, Nodaway County, on the 7th between 5:30 and 6:30 p. m., resulting in crop damage estimated at \$20,000. Wheat, oats, and rye were ruined but corn was expected to recover due to it being small. Some windows and roofs were damaged as well as fruit. The stones ranged from one-fourth inch to one inch in diameter. The storm path was one-half mile wide and the movement was from southwest to northeast.

Heavy hail, accompanied by severe wind and torrential rain, moved out of Kansas, striking in the vicinity of East Atchison and extended northeastward to Cameron, between 1:15 and 1:30 p. m. of the 20th. Severe damage resulted to crops, roofs of summer cottages, and automobile tops. The most damage to crops occurred in the bottoms east of East Atchison where corn, wheat, tobacco, hay, watermelons, and fruits were severely or totally destroyed. Stones averaged about one-half inch in diameter and in places the hail was a foot deep. No estimate of loss available. The storm path was about three miles wide.

#### TORNADOES

During the late afternoon of the 7th a storm, with rotary winds, struck the northeast part of Nodaway County, severely

injuring one person and leaving property damage estimated at \$10,000 to \$15,000 and damage to livestock estimated at \$3,000. There was very little crop damage except to fruits. The storm came from the southwest and moved northeastward with path one-fourth mile wide.

At the same time another storm, similar to the one above, occurred in the southeast part of Nodaway County, destroying barns and outbuildings with a loss estimated at \$3,000.

A small tornado occurred in Pike County on the 19th between 10:40 and 11:30 a. m., striking Bowling Green and the south part of Louisiana before crossing the Mississippi River at Louisiana. Three persons were injured at Bowling Green and property damage in the tornado area was estimated at \$25,000. The storm came from the southwest and traveled northeastward along a path fifteen to twenty miles long and fifty to one hundred yards wide.

#### EXCESSIVE PRECIPITATION

A twenty-four hour rainfall of 5.66 inches was recorded at Chillicothe on the morning of the 21st which caused a moderate flood in the Grand River, resulting in considerable crop damage in the bottoms.

On the night of the 26-27th a six-inch rain occurred at Moberly, causing a section of the Wabash Railway roadbed to wash out, wrecking a freight train, injuring three members of the train crew and killing or crippling many heads of cattle and sheep. Highways were blocked and basements of homes and stores in Moberly were flooded. Damage to wheat and corn was heavy as streams in the area overflowed bottoms.

#### LIGHTNING

One person was struck and killed by lightning near Sweet Springs on the 2d, while several persons were stunned at Kansas City and near Sedalia.

On the 5th one man and a team of horses were killed and another man injured by lightning in northern Stoddard County.



## CLIMATOLOGICAL DATA

## MISSOURI SECTION

W. J. MOXOM  
ST. LOUIS, MO.

Vol. XLIII

JULY 1939

No. 7

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## GENERAL SUMMARY

The mean temperature ranged from slightly below normal over a small area in the southeast Ozark Highlands to more than 6° above normal in the northwest portion of State. The western half of State averaged consistently from 2.5° to 6.6° above normal, while the eastern half averaged about 1.3° above normal. The warmest portion of the month was from the 4th to the 17th, when maxima of 100° and above occurred generally throughout the western half of State and at a few stations in the eastern half. Nearly normal or slightly below normal temperatures prevailed during the latter half of the month.

Light to moderate showers occurred generally during the first four days of the month, followed by a period of comparatively dry weather, with only scattered showers, until the 18th when light showers occurred generally throughout the State, and at frequent intervals during the following 10-day period. The monthly amounts were above normal throughout a large portion of the northeast and east-central sections, but were well below normal in the western half of State and most southeastern counties.

The prolonged high temperatures and dry weather during the period, 4th to 17th, had a damaging effect on the early corn and other growing crops in many western counties. However, the well-distributed rains of the 18th to 29th were very beneficial in restoring crop growth and reducing permanent damages.

## TEMPERATURE

The monthly mean for the State, 84 stations reporting, was 80.0°, or 2.0° above normal. The highest monthly mean was 84.7° at Kansas City, and the lowest monthly mean was 75.2° at Arcadia. The highest recorded was 107° at Appleton City on the 13th and 15th, and at Warsaw on the 15th, and the lowest was 51° at Grant City on the 29th, Goodland, Greenville, and Licking (near) on the 30th. The greatest daily range was 44° at Licking (near) on the 8th and 9th.

## PRECIPITATION

The average for the State, 145 stations reporting, was 2.91 inches, or 0.76 inch less than normal. The greatest local monthly amount was 9.38 inches at Farmington, and the least local monthly amount was 0.26 inch at Edgerton. The greatest amount in any twenty-four hours was 4.12 inches at Farmington on the 22-23d. The average number of days with 0.01 inch or more was 6.

## MISCELLANEOUS PHENOMENA

Flood.—Moderate flood in Grand River on 5th. Crest at Chillicothe, Mo., 19.1 feet, which was 1.1 feet above flood stage. Did not reach flood stage at any other station.

Fog.—Dense, 2d, 7th, 8th, 20th.

Hail.—Light, 3d at Unionville, 18th at Pleasant Hill, 19th at Advance, 22d at Willow Springs, 24th at Amity, 25th at St. Louis, 28th at West Plains. Moderate, 22d near Warrenton, with some damage to corn, 25th at Lexington, 26th in southwest part of Johnson county, 28th in south St. Louis.

Halos.—Solar, 4th, 5th, 7th, 22d; lunar, 1st, 23d, 26th.

Thunderstorms.—Local, 1st, 2d, 3d, 4th, 7th, 9th, 14th, 15th, 16th, 17th, 21st, 22d, 24th, 27th; more or less general,

8th, 18th, 19th, 23d, 25th, 26th, 28th.

Tornadoes.—At 4.30 a. m., on 25th at Braymer, Caldwell county, a storm described as a twister, injured one person and resulted in property damage estimated at \$2,500 and crop damage estimated at \$400.

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## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

1 1939  Stations OF ILLINOIS	Atmospheric pressure (reduced to sea level)					Wind			Relative humidity			Percentage of sunshine	
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12:30 p. m.		6:30 p. m.
Columbia.....	29.93	30.22	11	29.72	17	7.3	26	se.	16	82*	53*	54*	68
Kan. C. Airport.	29.90	30.19	11	29.67	17	8.1	40	sw.	18	71	44	43	78
St. Joseph.....	29.91*	30.18	10	29.65	17	7.5	21	nw.	25	88*	55*	56*	76
St. Louis.....	29.96*	30.24*	11	29.76*	17	9.8	41	nw.	25	74	52	53	66
Springfield.....	29.96*	30.21*	11	29.80*	3	7.6	27	n.	28	88*	58*	62*	81
Cairo, Ill.....	29.96	30.22	11	29.84	17	6.4	39	n.	15	84	59	59	85
Keokuk, Iowa..	29.94	30.24	11	29.68	4	6.0	24	w.	4	80	55	56	70

\* Data for Airport Station.

## COMPARATIVE DATA FOR JULY

Year	Temperature			Precipitation						Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy	
1888.....	79.3	111	50	2.85	4.44	1.50	2.62	0	7	...	...	...	...
1889.....	77.1	107	46	4.02	4.22	3.80	4.03	0	8	...	...	...	...
1890.....	79.6	110	42	3.04	3.12	3.90	2.10	0	5	...	...	...	...
1891.....	72.7	103	45	3.23	4.13	4.16	1.41	0	8	...	...	...	...
1892.....	75.8	102	45	4.88	5.27	4.95	4.43	0	9	12	10	9	5
1893.....	77.3	103	51	4.67	4.72	6.19	3.10	0	8	14	12	5	9
1894.....	76.5	109	42	2.67	1.48	3.43	3.11	0	5	18	10	3	8
1895.....	74.4	106	45	6.77	6.36	6.91	7.03	0	10	10	12	9	3
1896.....	77.3	108	48	5.51	7.53	4.34	4.66	0	9	15	11	5	9
1897.....	78.7	106	48	3.14	4.11	2.70	2.62	0	6	19	9	3	3
1898.....	76.1	104	42	5.72	5.00	5.71	6.44	0	9	16	10	5	6
1899.....	76.0	102	43	4.50	4.88	4.32	4.30	0	9	15	11	5	5
1900.....	76.9	102	46	4.15	3.91	4.58	3.96	0	8	17	10	4	2
1901.....	85.4	116	46	2.02	2.23	1.93	1.90	0	5	19	10	2	3
1902.....	77.0	103	50	4.10	5.95	4.54	1.80	0	8	17	11	3	3
1903.....	77.4	102	51	3.40	2.79	3.56	3.85	0	8	17	10	4	3
1904.....	74.2	100	47	4.61	4.86	5.32	3.65	0	10	15	11	5	5
1905.....	73.4	101	48	8.07	4.86	9.90	9.46	0	12	12	10	9	5
1906.....	74.7	100	48	3.54	2.33	4.11	4.19	0	8	17	9	5	5
1907.....	78.4	105	51	4.56	6.62	3.78	3.28	0	8	19	8	4	4
1908.....	76.5	101	49	3.36	3.36	3.09	3.64	0	8	18	9	4	4
1909.....	76.7	102	41	6.16	7.01	6.33	5.14	0	10	17	8	6	6
1910.....	76.8	109	46	5.79	4.79	4.59	7.99	0	9	16	9	6	6
1911.....	78.0	113	43	3.68	3.41	4.78	2.86	0	8	16	9	6	6
1912.....	78.8	104	52	2.88	2.15	2.53	3.95	0	7	18	9	4	4
1913.....	80.2	108	47	3.10	2.52	2.86	3.93	0	7	18	9	4	4
1914.....	80.5	109	45	2.67	2.48	3.98	1.56	0	7	17	9	5	5
1915.....	74.6	102	42	5.74	9.05	4.39	3.78	0	12	14	9	8	8
1916.....	81.6	109	52	1.22	1.28	1.01	1.36	0	3	25	5	1	1
1917.....	77.5	107	42	3.08	1.71	3.36	4.18	0	8	20	8	3	3
1918.....	77.1	110	41	1.62	1.98	1.89	1.00	0	6	19	8	4	4
1919.....	80.0	105	50	2.30	3.00	2.21	1.69	0	5	23	6	2	2
1920.....	76.3	105	47	3.30	3.69	3.17	3.05	0	7	18	8	5	5
1921.....	80.3	109	46	2.32	2.29	2.39	2.28	0	5	20	8	3	3
1922.....	76.8	103	46	5.50	6.87	5.57	4.06	0	8	17	9	5	5
1923.....	78.2	105	50	3.16	2.61	4.29	2.59	0	6	18	8	5	5
1924.....	73.3	103	40	5.55	4.42	6.65	5.57	0	10	15	11	5	5
1925.....	77.9	106	46	2.70	2.56	2.76	2.79	0	7	16	10	5	5
1926.....	78.0	108	40	3.07	3.66	2.54	3.02	0	7	17	9	5	5
1927.....	75.8	101	48	4.16	2.82	5.38	4.28	0	8	18	9	4	4
1928.....	77.2	102	48	2.93	3.47	3.15	2.16	0	7	17	10	4	4
1929.....	77.8	104	50	4.03	5.50	2.58	4.01	0	8	16	10	5	5
1930.....	81.2	113	42	1.00	0.50	1.48	1.01	0	3	22	7	2	2
1931.....	80.3	110	49	3.31	2.83	3.45	3.65	0	7	18	9	4	4
1932.....	79.8	109	48	3.61	3.89	4.08	2.85	0	7	19	8	4	4
1933.....	79.3	108	49	2.67	1.73	2.44	3.84	0	5	18	9	4	4
1934.....	86.2	117	48	1.18	0.82	1.22	1.50	0	4	20	9	2	2
1935.....	80.8	104	53	3.30	3.90	2.06	3.94	0	6	20	9	2	2
1936.....	85.3	118	44	1.52	0.72	1.48	2.37	0	3	23	6	2	2
1937.....	77.9	105	45	4.06	4.80	3.34	4.05	0	8	17	11	3	3
1938.....	79.7	110	53	3.50	2.91	2.58	5.00	0	7	19	8	4	4
1939.....	80.0	107	51	2.91	3.13	2.24	3.37	0	6	19	9	3	3
Period.....	78.0	118	40	3.67	3.74	3.72	3.55	0	7	18	9	4	4



## Climatological Data for July 1939

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches				Number of days				Prevailing direction of wind	Observers		
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Length of record, years	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelting	With precip., .01 inch or more	Clear			Partly cloudy	Cloudy
Northern Division																					
Bethany	Harrison	916	44	78.8	+ 2.5	98	12†	59	30	30	46	2.95	-1.21	1.58	0	5	24	7	0	se.	A. S. Cummling
Brunswick	Chariton	652	58	80.9	+ 4.8	103	12	62	31	38	60	1.55	-2.56	0.66	0	6	18	7	6	nw.	O. K. Benecke
Canton, Lock & Dam 20	Lewis	488	1	78.8	.....	102	6	57	30	28	9	2.66	+0.33	1.70	0	5	12	13	6	s.	Lockmaster
Chillicothe	Livingston	779	30	80.1	+ 3.1	102	12	59	30	36	33	2.98	-0.44	1.37	0	7	24	5	2	e.	Wm. J. Olenhouse
Clifton Hill	Randolph	731	40	79.0	+ 2.6	102	17	60	29†	33	30	3.78	+0.42	1.53	0	8	20	8	3	s.	Dr. A. J. Bradsher
Columbia	Boone	740	49	80.8	+ 3.5	102	17	59	30	31	49	2.33	-1.16	0.94	0	5	10	16	5	s.	U. S. Weather Bureau
Conception	Nodaway	980	50	81.0	+ 4.4	103	12	60	30	38	55	0.59	-4.08	0.42	0	5	13	16	2	se.	Fr. Adelm Hess
Edgerton	Platte	856	19	81.5 <sup>a</sup>	+ 5.4	105	12†	55	30	.....	28	0.26	-3.24	0.19	0	3	22 <sup>a</sup>	6 <sup>a</sup>	2 <sup>a</sup>	s.	Fred L. Stiff
Elaberry	Lincoln	449	8	78.2	.....	102	13	55	1†	34	8	2.91	.....	1.00	0	8	15	15	1	s.	Ray E. Mills
Fayette	Howard	760	59	79.7	+ 2.5	100	13†	59	30	36	56	1.86	-1.39	1.15	0	5	21	5	5	ne.	Morrison Observatory
Fulton	Callaway	818	51	79.6	+ 1.9	105	13	53	30	40	47	1.37	-1.92	0.90	0	6	21	9	1	se.	Clyde C. Herring
Graut City	Worth	1,134	35	78.4	+ 2.2	100	12	51	29	40	47	5.31	+0.68	2.95	0	5	11	20	0	se.	Howard Rybolt
Hannibal	Marion	759	47	77.6	+ 0.8	97	7†	58	30	29	55	2.46	-0.63	1.22	0	5	13	10	8	se.	Hannibal Water Dept.
Kansas City Airport	Jackson	741	50	84.7	+ 6.6	105	15	65	30	33	50	1.18	-2.95	0.93	0	7	13	14	4	sw.	U. S. Weather Bureau
Kansas City Univ.	Jackson	908	1	83.5	.....	104	15	60	30	32	1	1.13	.....	0.77	0	7	14	15	2	s.	University of Kansas City
Kidder	Caldwell	1,020	47	80.3	+ 3.7	103	12	60	29†	33	51	2.13	-1.75	0.76	0	6	29	0	2	se.	Mrs. Geraldine Terry
King City	Gentry	1,095	.....	.....	.....	.....	.....	.....	.....	.....	13	1.79	-1.75	1.04	0	5	11	17	3	sw.	John M. Martin
Kirksville	Adair	969	50	78.0 <sup>b</sup>	+ 2.0	98	13	58	1†	30	57	4.79	+0.49	2.53	0	5	17 <sup>b</sup>	11 <sup>b</sup>	1 <sup>b</sup>	sw.	Charles Noble
Lawson	Ray	1,070	1	80.4	.....	101	12†	59	29	33	1	1.66	.....	1.20	0	6	15	15	1	se.	Elmer E. Lamb
Linneus	Linn	816	.....	.....	.....	.....	.....	.....	.....	.....	7	2.84	.....	1.30	0	5	23	7	1	ne.	H. D. Taggart
Louisiana	Pike	469	45	77.6	+ 1.2	100	7†	54	30	35	58	4.09	+0.49	1.89	0	7	20	10	1	e.	Stark Bro's Nurseries
Macon	Macon	875	40	78.4	+ 1.2	100	13	58	30	33	46	5.97	+2.56	3.90	0	6	18	10	3	s.	Mrs. W. C. Brown
Maryville	Nodaway	1,169	49	79.8	+ 4.1	104	12	59	23	32	45	0.87	-4.36	0.51	0	4	20	6	5	se.	R. B. Montgomery
Memphis	Scotland	787	0	79.0	.....	99	15	58	30	34	9	2.48	-0.32	1.49	0	6	14	8	9	se.	John W. Alexander
Mexico	Audrain	800	50	79.2	+ 1.9	101	7	56	30	32	61	3.74	+0.53	1.08	0	8	.....	.....	.....	.....	Mrs. Abbie Snoddy
Moberly	Randolph	875	2	79.2	.....	100	7†	56	30	32	2	3.54	.....	0.92	0	6	22	7	2	s.	McCormick Hospital
Oregon	Hot	1,048	83	82.0	+ 6.4	105	16	60	29	33	83	1.36	-2.82	1.13	0	2	28	3	0	se.	Miss Mina Wright
St. Charles	St. Charles	520	51	80.7	+ 2.6	105	7	59	30	31	61	2.02	-0.97	0.39	0	9	25	5	1	s.	Martin L. Comann
St. Joseph	Buchanan	957	29	82.7	+ 5.3	104	16	63	1	30	67	0.96	-2.82	0.86	0	3	18	10	3	se.	U. S. Weather Bureau
Steffenville	Lewis	650	41	78.3	+ 0.5	100	13	55	30	32	46	3.14	-0.97	0.94	0	6	15	15	1	n.	Frank Hall
Tarkio	Atchison	916	36	79.4	+ 2.6	103	12†	58	30	37	45	1.57	-2.58	0.66	0	6	20	10	1	se.	Albert Volker
Trenton	Grundy	822	43	80.8	+ 4.0	102	7†	60	30	32	44	3.12	-0.95	2.11	0	6	20	10	1	s.	W. H. Estes
Unionville	Putnam	1,062	46	79.6	+ 3.1	103	12†	60	1†	35	46	1.34	-2.78	0.97	0	4	23	4	4	sw.	John H. Schick
Warrenton	Warren	816	57	79.0	+ 1.2	98	6†	57	30	49	4.49	+1.35	1.50	0	8	12	14	5	sw.	Prof. A. W. Ebeling	
Keokuk, Iowa	Lee, Ia.	574	67	78.8	+ 1.9	99	7	58	16	25	67	2.37	-1.04	1.21	0	6	10	13	8	sw.	U. S. Weather Bureau
<b>Division means</b>	<b>and extremes</b>	.....	.....	79.9	+ 3.0	105	7†	51	29	40	.....	3.13	-0.61	4.10	0	6	18	10	3	se.	.....
Southwestern Division																					
Appleton City	St. Clair	813	44	82.0	+ 3.8	107	13†	56	30	39	47	0.42	-3.89	0.27	0	3	24	6	1	sw.	Rolla Brown
Bolivar	Polk	1,071	36	80.6	+ 3.3	104	15	59	30	32	44	3.22	-0.50	1.44	0	5	17	10	4	sw.	Southwest Baptist College
Boonville	Cooper	650	1	80.7	.....	102	7	61	30	32	62	2.74	-0.50	0.88	0	5	21	6	4	se.	Boonville Water Dept.
Clinton	Henry	786	46	82.2	+ 3.9	104	13†	58	30	37	52	0.82	-2.61	0.38	0	6	.....	.....	.....	.....	U. S. Weather Bureau
Dean	McDonald	1,000	35	79.2	+ 1.9	100	15†	53	29	35	40	0.85	-3.56	0.34	0	5	28	2	1	sw.	E. S. Taylor
Eldon	Miller	934	44	80.4 <sup>p</sup>	+ 3.2	.....	.....	.....	.....	.....	40	1.43	-1.79	.....	0	5	9 <sup>p</sup>	7 <sup>p</sup>	0 <sup>p</sup>	.....	E. H. Shepherd
Garber	Taney	950	5	79.0	.....	104	15	54	1†	40	5	3.83	.....	1.88	0	8	20	4	7	e.	William H. Durham
Harrisonville	Cass	904	61	82.6	+ 4.9	104	12	61	30	35	64	0.93	-2.68	0.55	0	4	18	7	6	sw.	John H. Patterson
Jefferson City	Cole	557	49	79.0	+ 0.9	101	18	58	1†	34	57	0.99	-2.12	0.45	0	6	21	6	4	sw.	Mrs. Frank Kliegel
Lakeside	Miller	595	8	80.5	.....	104	15	57	30	37	8	1.54	.....	1.18	.....	5	.....	.....	.....	.....	W. S. Frame
Lamar	Barton	980	51	82.4	+ 4.0	106	15	58	30	35	58	3.57	-0.65	1.45	0	3	24	5	2	sw.	Jesse A. Mann
Lebanon	Laclede	1,265	51	79.4	+ 2.5	102	15	54	1	32	52	3.18	-0.78	1.15	0	6	17	12	2	sw.	Mrs. Rosa E. Montellus
Lexington	Lafayette	688	54	83.0	+ 5.6	105	16	63	29	32	55	3.93	-0.08	1.90	0	6	23	8	0	ne.	Miss Carrie Loomis
Lockwood	Dade	1,078	33	81.1	+ 3.5	102	15	58	30	31	43	2.93	-1.83	1.54	0	5	19	11	1	sw.	Hubert A. Nieman
Marshall	Saline	779	52	81.7	+ 4.2	102	7†	57	30	31	49	2.32	-1.25	1.10	0	7	19	10	2	sw.	See. Chamber of Commerce
Mountain Grove	Wright	1,463	38	78.8	+ 2.4	99	7†	56	30	31	42	3.93	+0.04	2.03	0	6	15	15	1	se.	Mo. Fruit Exp. Station
Mount Vernon	Lawrence	1,174	27	80.5	+ 2.8	103	15	56	30	35	39	2.22	-2.97	0.97	0	5	15	16	0	sw.	G. H. Boswell
Neosho	Newton	1,011	52	80.0	+ 2.5	100	15	53	30	35	56	2.13	-2.52	1.05	0	6	25	5	1	sw.	U. S. Fisheries Station
Nevada	Vernon	862	46	82.2	+ 2.6	106	15	57	30	37	47	2.88	-0.78	2.87	0	2	27	2	2	sw.	Henry Kraft
Sedalia	Pettis	910	26	83.0	+ 5.5	103	13†	58	30	32	28	0.41	-4.03	0.26	0	5	23	6	2	sw.	Dr. J. E. Cannaday
Seligman	Barry	1,542	38	78.8 <sup>b</sup>	+ 2.1	94	15	59	30	28	36	2.02	-2.10	0.75	0	4	25 <sup>b</sup>	4 <sup>b</sup>	0 <sup>b</sup>	sw.	Floyd E. Fawver
Seymour (near)	Webster	1,642	33	77.2	+ 1.7	98	15	52	30	32	33	3.89	-0.05	1.24	0	7	19	9	3	se.	A. L. Hailey
Springfield	Greene	1,301	51	80.6	+ 3.8	100	15	60	30	29	51	2.83	-1.38	0.86	0	6	17	10	4	s.	U. S. Weather Bureau
Versailles	Morgan	1,037	12	80.8	+ 1.9	101	18	55	30	32	15	0.71	-3.62	0.45	0	5	20	9	2	sw.	I. M. Wilson
Warrensburg	Johnson	878	52	83.6	+ 4.8	106	15	59	30	34	59	0.87	-3.10	0.59	0	3	22	7	2	sw	



## Day of month

Continued on next page



## Daily Precipitation for July 1939—Continued from preceding page

Stations	Drainage-basins	Day of month																															Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
<i>Southeastern Division—</i>	<i>Concluded</i>																																
Bragg City <sup>2</sup>	St. Francis			.31					1.30	.30							.80				.37			T.	.08			T.	.14				2.30
Campbell	do		.24						.97								.99				.12		.05	.07			T.	.25					2.69
Cape Girardeau <sup>2</sup>	Mississippi		.18		.05				.05								.68	.53			.78			.24	T.			.69	.26				2.68
Caruthersville <sup>1</sup>	do		.02	.35					.18								.32	.07												1.50			3.22
Centerville <sup>1</sup>	Black								.35											.08	.22			.79					1.15				2.59
Crystal City <sup>1</sup>	Mississippi			.13													2.54			1.25	.12			.75			.43			.42			5.64
Cuba <sup>1</sup>	Meramec							.60												.50			1.45							.32			2.87
Dexter <sup>1</sup>	St. Francis		.05						2.00								1.15				.48								.41				4.09
Doulihan	Black		.16						.32											.65				.53			.79	.05					2.50
Farmington	St. Francis		.01	.11					2.20								1.97				.17			3.95					.80				9.38
Fisk <sup>2</sup>	do								.82		.06						1.97				.63												3.48
Fredericktown <sup>1</sup>	do				.10				.13								.95	.50			.25			1.72						.07			3.72
Goodland	Black			.07					.68								.08				.23	.25		1.25					.38			2.69	
Greenville	St. Francis		.33						.35								1.12		.11					.80			.10		.37			3.18	
Jackson	Mississippi		.33	.08													.28	2.04						.40								3.13	
Jerome <sup>1</sup>	Gasconade				.10				.67											.47	.20			2.60					.80			4.84	
Koshtkoung	Black		.06	.40					.07								T.				T.	T.		.20			.16	.04	.01			0.94	
Leeper <sup>1</sup>	do			T.					.31															.10						.05			0.56
Licking (near)	Gasconade			T.					.11											.52				1.10					.25	.05			2.03
Marble Hill	Mississippi		.70	.40					.10								1.35							.35						.10			3.10
Meramec Park <sup>1</sup>	Meramec			.20					1.18								.71			.57	.27			1.29						.11			4.33
Morehouse	Mississippi								.34								35	1.85			.49						T.	.05				3.08	
New Madrid <sup>1</sup>	do			.01					.88								.63	.12			.58				.08				1.64			3.94	
Owensville <sup>1</sup>	Gasconade			.45					1.50												1.14			1.07								4.16	
Pacific <sup>1</sup>	Meramec			.28					1.20									.93		1.10	.67		1.00	.48					3.00			8.66	
Parma <sup>1</sup>	St. Francis								1.63	.45							.91				.62								.41			4.02	
Poplar Bluff <sup>1</sup>	Black		.15	.03					.72								.12				.56			.48				T.	T.			2.06	
Richwoods <sup>1</sup>	Meramec				.09				1.10								1.40	.15		.40				1.70						.90			5.74
Rolla	do			.08					.40	.57										.52				1.01					.80			3.38	
St. Louis <sup>1</sup>	Mississippi		T.	.39					T.								.24	.37		.72	.10			T.	.24	T.	.01		T.			2.07	
St. Louis Airport <sup>1</sup>	Missouri			.41					.02								.44	.13		.12	.02	T.		.19		.24	.02		.11			1.70	
St. Louis University <sup>1</sup>	Mississippi			.50					T.								.19	.76		.50	.07		T.	.18		.01	T.		.10			2.31	
Salem <sup>1</sup>	Meramec				.10				.20											.15	.43			.68						.15			1.71
Sikeston <sup>2</sup>	Mississippi		T.						.12					.09	T.		2.30	.41		T.							T.	T.				2.92	
Union	Meramec		T.	.13					3.20								.55			.40	1.30		.66	.55	.04	.13			.70			7.86	
Valley Park <sup>1</sup>	do		T.	.47					.12								.03	.19	.14		1.80	.29		.23	.03	.03				.87			4.20
Van Buren	Black			T.					.43												T.												0.43
Wappapello Dam <sup>1</sup>	St. Francis			.06					1.30	.04							1.62							.78	.21			.23	T.			0.43	
Washington Univ. <sup>1</sup>	Mississippi			.63													.15	.17	.35		.60	.04		.30				.02		.50	T.	4.24	
West Plains	Black		.02	.14	T.				.13												.04			.75				.02	T.	.50	T.	1.60	
Williamsville <sup>1</sup>	do			.01					.02	.13															.05			.23		.09			0.63
Willow Sprgs. (near) <sup>1</sup>	White			.05					.08	.62							1.31	.35						.90					.26			2.62	
Zalma (near) <sup>1</sup>	Mississippi								3.98															.31	.01			.13				6.09	
Calro, Ill. <sup>1</sup>	do			.01	T.				.09								.13	.91			.10			T.			.01	.11				1.36	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation.

<sup>1</sup> First-order Weather Bureau station; precipitation is for the 24-hour period, midnight to midnight, unless otherwise indicated. <sup>2</sup> Precipitation is measured in the morning; amount then recorded is for the preceding 24 hours. <sup>3</sup> Precipitation is for 24-hour period, midnight to midnight. <sup>4</sup> Precipitation measured with recording gage. \* Included in next measurement. T. Trace, or precipitation less than 0.01 inch. † Estimated. ‡ Partially estimated. |||| Incomplete.

NOTE:—In addition to the stations shown on daily temperature page, records of daily temperatures are kept at the following stations in Missouri: Advance, Appleton City, Bethany, Bolivar, Boonville, Campbell, Canton Lock No. 20, Clifton Hill, Columbia Airport, Conception, Dean, Edgerton, Elsberry, Fulton, Goodland, Greenville, Kansas City University, Kidder, Kirksville Airport, Koshkonong, Lakeside, Licking (near), Lockwood, Marble Hill, Memphis, Mount Vernon, St. Joseph Airport, St. Louis Airport, St. Louis University, Saverton Lock No. 22, Seligman, Seymour (near), Springfield Airport, Steffenville, Tarkio, Versailles, Wappapello Dam, Warsaw, and Washington University.

## Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for July 1939

(See precipitation data in daily precipitation table)

Station	Data	Day of month																														Monthly	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		31
Columbia.....	{ Evaporation .....	.209	.112	.309	.107	.214	.227	.275	.257	.225	.242	.271	.245	.378	.275	.256	.331	.323	.350	.153	.130	.172	.261	.201	.107	.151	.094	.195	.227	.059	.207	.168	6.731
	{ Mean temperature .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
	{ Wind movement .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Lakeside ..... (Osage Dam)	{ Evaporation .....	.282	.235	.187	.307	.325	.353	.349	.312	.236	.323	.350	.305	.473	.312	.341	.359	.337	.451	.394	.179	.275	.340	.350	.156	.298	.316	.327	.303	.159	.285	.255	9.474
	{ Mean temperature .....	72	75	78	84	85	86	85	84	80	77	76	80	90	82	87	87	84	86	80	78	79	84	76	78	81	80	82	76	76	72	74	80.5
	{ Wind movement .....	22	15	22	45	31	30	28	11	30	25	16	33	48	83	20	30	41	55	61	23	22	47	48	16	32	39	26	7	45	32	21	1,004
St. Louis ..... (Washington University)	{ Evaporation .....	.287	.281	.207	.181	.163	.276	.291	.279	.215	.290	.324	.255	.332	.328	.290	.257	.106	.198	.299	.061	.194	.183	.166	.074	.254	.178	.267	.263	.189	.203	.186	7.172
	{ Mean temperature .....	74	76	79	80	84	86	88	86	81	80	77	82	90	84	78	75	80	86	76	78	78	80	76	79	79	82	84	81	74	74	74	80.0
	{ Wind movement .....	34	20	32	47	16	40	25	17	40	37	36	23	64	37	23	46	36	41	35	22	20	14	30	14	31	39	27	13	51	41	19	970

Observations taken at 8:00 a. m. except at 7:30 a. m. at Lakeside. For Columbia, Lakeside, and St. Louis (Washington University) descriptions see July 1938, April 1932, and August 1938 reports respectively. \* Included in next measurement.



Daily Temperatures for July 1939

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
Northern Division																																		
Brunswick §§.....	Maximum	81	89	89	96	98	100	101	93	91	90	95	103	102	98	98	94	100	97	87	87	92	92	87	92	93	93	99	84	87	90	95	93.3	
Chillicothe §§.....	Minimum	63	65	67	69	70	77	74	75	69	69	65	65	73	67	70	72	72	73	69	68	66	66	68	66	68	67	69	72	64	64	62	68.5	
Columbia .....	Maximum	80	88	91	95	97	99	100	91	92	87	96	102	93	101	98	94	100	87	85	87	94	94	89	89	93	94	92	84	86	89	93	92.3	
Fayette.....	Minimum	62	63	67	67	75	78	76	75	65	65	64	73	75	65	68	72	70	73	66	64	66	73	63	65	66	66	70	71	60	59	64	67.9	
Grant City .....	Maximum	81	86	89	95	96	101	101	94	91	89	91	100	101	97	96	90	102	98	88	87	91	88	85	90	93	92	98	83	83	85	90	92.0	
Hannibal .....	Minimum	60	68	69	70	76	77	77	77	71	68	66	72	76	66	74	74	72	70	70	66	69	69	68	68	68	72	67	63	59	65	69.6		
Kansas City Airport.....	Maximum	81	86	88	95	95	98	99	91	89	87	90	98	100	97	95	90	100	97	88	85	90	88	86	87	94	92	95	90	82	85	89	91.2	
Kirksville .....	Minimum	60	66	68	69	76	76	73	77	71	68	61	71	81	67	61	71	77	61	71	73	69	67	68	68	70	65	68	65	66	69	70	68	68.2
Lawson .....	Maximum	78	86	85	90	93	94	95	87	90	85	94	100	95	93	93	89	92	86	86	86	93	95	96	96	97	96	97	97	90	91	91.5		
Louisiana .....	Minimum	62	65	66	65	72	77	72	71	59	64	64	74	70	62	70	69	71	70	65	65	67	68	56	59	57	63	62	61	51	61	63	65.2	
Macon§§.....	Maximum	78	84	86	91	92	94	97	92	86	85	84	95	97	91	85	84	96	91	76	83	87	85	82	90	88	87	94	90	77	83	86	87.6	
Maryville .....	Minimum	61	69	67	65	75	77	75	76	69	67	61	71	81	67	67	66	67	69	66	63	62	65	66	66	65	69	76	70	60	58	62	67.7	
Mexico§§.....	Maximum	81	89	92	100	101	103	105	98	92	90	100	105	101	104	105	105	102	96	87	90	100	93	88	95	99	96	100	87	86	93	96	95.9	
Moberly .....	Minimum	66	71	71	79	79	80	79	77	71	71	74	75	79	71	81	78	83	68	70	71	71	73	71	70	75	73	77	71	65	65	70	73.5	
Oregon .....	Maximum	81	88	89	91	94	94	94	88	85	88	96	98	93	90	87	94	94	94	94	94	88	86	85	86	86	90	94	91	82	83	86	89.0	
St. Charles §§.....	Minimum	58	66	65	66	76	78	75	67	64	63	74	73	66	70	68	68	68	68	68	63	61	66	63	64	65	69	70	68	62	58	63	67.1	
St. Joseph .....	Maximum	77	85	87	95	95	97	98	90	89	88	94	101	100	98	101	101	99	94	86	88	96	92	85	90	96	93	96	85	84	90	94	92.4	
Trenton .....	Minimum	62	64	65	70	75	77	71	74	65	65	65	73	75	65	76	73	75	70	67	68	68	72	65	66	68	71	69	59	61	64	68.5		
Unionville §§.....	Maximum	80	80	85	94	95	96	100	90	90	85	85	98	100	92	90	85	100	90	82	85	87	90	90	92	86	93	94	83	82	85	90	89.5	
Warrenton .....	Minimum	56	64	65	67	74	76	74	72	70	65	57	72	79	62	65	65	65	68	65	66	68	67	62	62	65	68	66	70	62	54	58	65.8	
Keokuk, Iowa.....	Maximum	85	88	89	94	95	97	99	91	86	91	98	100	90	91	87	99	87	80	84	89	89	85	90	91	92	96	82	83	88	90	90.2		
Clinton .....	Minimum	60	66	65	65	73	76	75	65	64	62	72	70	67	69	68	66	70	65	62	60	66	65	64	64	61	65	60	68	60	58	62	66.5	
Eldon§§.....	Maximum	82	86	86	91	95	96	96	89	92	90	98	104	100	96	95	95	88	100	96	84	85	92	90	85	91	90	93	97	83	81	85	93.1	
Garber .....	Minimum	61	65	67	67	73	75	74	75	70	66	63	68	76	64	70	69	68	69	68	67	61	63	64	67	64	65	68	70	61	56	61	66.9	
Harrisonville§§.....	Maximum	67	70	66	66	76	74	75	76	67	65	60	70	75	63	70	68	69	70	72	66	60	60	66	63	62	64	67	68	69	60	56	60	66.8
Jefferson City §§.....	Minimum	78	89	96	100	105	97	93	91	93	98	104	99	92	87	94	97	89	86	92	95	84	94	88	89	98	98	87	84	90	92	92.8		
Lamar§§.....	Maximum	60	67	70	69	76	77	71	69	64	69	74	68	65	69	69	74	74	70	65	69	68	64	70	68	70	72	61	59	62	68	68.6		
Lebanon .....	Minimum	78	88	89	96	100	99	99	91	92	92	100	103	102	100	103	104	99	87	85	90	99	91	89	89	96	98	98	86	88	93	94.1		
Lexington§§.....	Maximum	63	68	68	72	78	81	76	74	69	69	70	77	77	70	75	75	79	72	68	68	71	72	68	70	69	71	72	71	64	64	69	71.8	
Marshall .....	Minimum	85	86	90	92	97	98	102	91	93	92	96	102	101	95	94	90	100	93	87	87	93	91	88	90	94	97	100	95	90	91	94	93.4	
Mountain Grove .....	Maximum	63	64	64	66	77	79	76	73	66	64	76	74	76	72	71	70	72	67	65	66	70	62	64	65	69	70	70	61	60	62	68.3		
Neosho .....	Minimum	87	90	98	98	102	102	96	93	91	98	104	103	105	101	98	98	98	95	88	93	96	96	96	96	96	96	96	96	96	96	96	96.9	
Nevada .....	Maximum	66	65	67	72	75	78	73	77	69	68	67	72	78	70	75	76	79	79	68	70	69	73	68	68	65	69	74	72	63	64	65	70.8	
Sedalia .....	Minimum	80	87	91	95	98	99	102	100	90	90	94	101	101	98	98	98	102	99	88	86	94	93	91	91	92	92	98	93	82	86	92	93.9	
Springfield .....	Maximum	65	64	65	80	70	77	73	78	68	66	63	64	67	72	70	73	74	67	70	67	65	68	70	68	65	68	70	67	68	64	65	69.5	
Warrensburg .....	Minimum	86	83	84	91	92	96	99	89	89	88	91	96	93	97	88	95	96	85	89	90	94	87	86	91	93	96	89	82	83	88	90.5		
Arcadia§§.....	Maximum	59	63	66	70	71	72	70	73	67	64	59	66	73	65	70	72	68	66	62	68	65	65	68	65	68	67	68	68	60	58	66.4		
Birch Tree(near).....	Minimum	88	87	90	96	97	99	95	91	96	96	97	101	104	106	104	99	101	95	94	98	95	93	95	95	95	97	94	93	93	93	95	95.8	
Caruthersville§§.....	Maximum	64	67	69	71	75	72	69	71	62	63	67	70	72	73	77	74	70	68	68	72	67	67	70	68	68	70	67	58	63	68	68.9		
Crystal City§§.....	Minimum	86	85	87	93	94	98	100	95	86	88	91	95	96	97	102	97	102	97	90	92	91	85	89	91	91	97							







## CLIMATOLOGICAL DATA

## 19 MISSOURI SECTION

W. J. MOXOM  
ST. LOUIS, MO.

Vol. XLIII

AUGUST 1939

No. 8

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## GENERAL SUMMARY

August was slightly cooler and wetter than normal. The average temperature for the State was  $75.4^{\circ}$ , which is  $1.1^{\circ}$  below normal. The greatest deficiency in temperature occurred over the northern division. A general cool period prevailed throughout the State from the 17th to the 24th, inclusive, with the temperature as low as  $45^{\circ}$  at Greenville on the 22d. Periods of abnormal temperatures were rather short and mostly local. The highest reported was  $106^{\circ}$  at Caruthersville on the 14th.

The average precipitation for the State was 126 per cent of the normal, and was fairly well distributed during the month, except near the close which marked the beginning of a general dry period. The northern division averaged 168 per cent of the normal, southwestern 97 per cent, and the southern 145 per cent.

Temperature and moisture conditions were quite favorable for advancement of growing crops. Corn was in good to excellent condition, well advanced, and much of the early planted had matured by the close of the month and was safe from frost. Meadows, pastures and ranges made good growth and furnished considerable feed. Third cutting of alfalfa was general and some sections reported a fourth cutting the last of the month. Truck crops and vegetables were generally good to excellent. — H. C. G.

## TEMPERATURE

The monthly mean for the State, 84 stations reporting, was  $75.4^{\circ}$ , or  $1.1^{\circ}$  below normal. The highest monthly mean was  $79.2^{\circ}$  at Caruthersville, and the lowest monthly mean was  $72.0^{\circ}$  at Kirksville. The highest recorded was  $106^{\circ}$  at Caruthersville on the 14th, and the lowest was  $45^{\circ}$  at Greenville on the 22d. The greatest daily range was  $46^{\circ}$  at Garber on the 25th.

## PRECIPITATION

The average for the State, 145 stations reporting, was 4.80 inches, or 1.00 inch more than normal. The greatest local monthly amount was 13.04 inches at Monroe City, and the least local monthly amount was 1.26 inches at Owensville. The greatest amount in any twenty-four hours was 6.18 inches at Salem on the 12-13th. The average number of days with 0.01 inch or more was 9.

## MISCELLANEOUS PHENOMENA

Auroras.—11th, 12th, 13th, 20th, 21st.

Fog.—Dense, 9th, 10th, 18th, 19th, 23d, 24th.

Hail.—Light, 11th, at Fayette, Saverton, and Salem; 22d, at Appleton City, Edgerton, Marshall, Rolla, Salem, and Warrenton; 23d, at Eldon and Mexico; 24th, at Appleton City, Conception, and Purcell; 25th, at Marshall, Neosho, and St. Louis. Moderate, 24th, at Alba with very little damage; 25th, at St. Louis University. Heavy, 12th, at Licking (near); 13th, in Barton County, seven to eleven miles southwest of Lamar. (See special hailstorm notes); 24th, at Carthage, Carterville, Duenweg, Jasper, Joplin, Oronogo, Tipton Ford, Webb City, and north of Greenfield. (See special hailstorm notes).

Halos.—Solar, 5th, 6th, 9th, 10th, 28th; lunar, 1st, 30th, 31st.

Thunderstorms.—Local, 1st, 2d, 3d, 5th, 6th, 7th, 8th,

9th, 10th, 13th, 14th, 16th, 17th, 18th, 19th, 20th, 21st, 23d, 24th, 25th, 26th, 29th, 30th, 31st; more or less general, 11th, 12th, 22d.

Windstorms.—10th, at Columbia; trees, wires, and small buildings damaged and corn blown down. 12th, at Morehouse; trees damaged. 13th, at Forsyth and Rockaway Beach in Taney

(Continued on page 43)

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind				Relative humidity			Percentage of sunshine
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12:30 p. m.	6:30 p. m.	
Columbia.....	29.94*	30.13	26	29.69	7	6.7	26	n.	22	88*	55*	64*	63
Kan. Airport.....	29.92	30.12	26	29.61	6	7.4	33	w.	7	83	53	52	66
St. Joseph.....	29.93*	30.14*	26	29.60*	6	7.7	27	nw.	7	90*	56*	57*	65
St. Louis.....	29.96*	30.20*	26	29.76*	17	9.3	32	sw.	20	78	53	58	69
Springfield.....	29.96*	30.10*	26	29.77*	18	6.9	24	w.	20	92*	58*	65*	66
Cairo, Ill.....	29.96*	30.15	25	29.71	18	5.9	23	n.	22	86	57	63	80
Keokuk, Iowa.....	29.96*	30.24	26	29.69	8	5.8	25	nw.	20	83	54	59	68

\* Data for Airport Station.

## COMPARATIVE DATA FOR AUGUST

Year	Temperature			Precipitation					Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy
1888.....	74.0	110	45	7.03	5.95	7.84	7.30	0	11	..	..	..
1889.....	73.5	101	52	1.69	1.65	2.11	1.31	0	14	..	..	..
1890.....	73.3	106	47	5.13	4.25	7.21	3.93	0	9	..	..	..
1891.....	73.2	102	38	5.29	5.96	5.14	4.78	0	8	..	..	..
1892.....	74.3	102	44	2.65	2.24	2.63	3.08	0	6	17	8	6
1893.....	72.8	100	40	1.99	2.55	1.89	1.53	0	4	18	10	3
1894.....	77.0	111	39	1.64	1.00	1.59	2.33	0	5	14	16	1
1895.....	75.3	104	46	4.02	5.45	3.51	3.09	0	8	15	11	5
1896.....	76.6	108	41	3.13	3.32	3.25	2.82	0	6	17	10	4
1897.....	74.1	108	41	2.37	2.48	2.23	2.39	0	6	19	9	3
1898.....	75.8	103	44	3.13	2.93	2.88	3.57	0	5	17	10	4
1899.....	78.8	107	49	3.18	4.19	2.76	2.45	0	7	18	10	3
1900.....	80.3	105	52	3.55	2.99	4.79	2.87	0	6	19	9	3
1901.....	78.4	109	47	2.05	1.12	2.74	2.29	0	5	19	9	3
1902.....	75.0	103	47	6.06	5.66	6.79	5.74	0	10	14	11	6
1903.....	74.5	102	43	5.00	6.54	5.01	3.44	0	10	16	11	4
1904.....	73.7	100	43	5.40	5.61	5.84	4.76	0	8	16	10	5
1905.....	76.4	99	48	4.68	4.19	5.90	3.94	0	8	19	7	5
1906.....	76.6	101	40	4.70	3.99	5.10	5.01	0	11	14	10	7
1907.....	77.3	109	47	3.89	3.92	3.90	3.85	0	9	17	8	6
1908.....	76.4	102	46	3.46	3.63	3.61	3.14	0	8	17	9	5
1909.....	79.5	110	40	0.60	0.31	0.67	0.81	0	2	24	6	1
1910.....	74.7	103	40	2.92	2.63	3.56	2.57	0	6	15	9	7
1911.....	75.4	109	41	4.33	2.81	4.97	5.21	0	7	15	8	8
1912.....	76.2	104	41	4.04	4.77	3.42	3.93	0	9	17	8	6
1913.....	82.8	110	41	1.09	1.24	0.67	1.37	0	3	22	7	2
1914.....	78.0	106	49	4.25	3.73	4.53	4.48	0	9	15	9	7
1915.....	69.8	98	37	8.19	4.99	7.57	12.02	0	12	12	9	10
1916.....	79.2	107	41	4.09	5.39	2.55	4.33	0	7	19	7	5
1917.....	73.3	104	38	4.69	3.13	5.04	5.89	0	9	16	8	7
1918.....	81.8	111	45	3.57	3.22	2.91	4.59	0	8	17	9	5
1919.....	75.7	106	44	4.33	4.41	4.47	4.12	0	9	17	9	5
1920.....	73.1	102	43	4.69	3.56	5.94	4.56	0	9	15	8	8
1921.....	76.8	109	48	5.39	5.16	6.42	4.60	0	9	14	10	7
1922.....	77.5	107	46	2.44	2.68	1.67	2.97	0	6	18	8	5
1923.....	77.3	108	42	3.81	5.47	1.87	4.08	0	8	16	9	6
1924.....	77.2	106	48	4.11	3.66	4.50	4.18	0	7	19	8	4
1925.....	76.5	107	45	3.34	5.31	2.60	2.10	0	6	19	8	4
1926.....	77.5	106	50	5.65	4.03	6.39	6.53	0	10	15	9	7
1927.....	71.1	97	39	5.09	4.19	7.04	4.04	0	9	14	10	7
1928.....	76.4	99	45	5.48	4.37	6.75	5.33	0	9	15	10	6
1929.....	76.0	105	43	2.58	1.84	2.21	3.69	0	6	18	9	4
1930.....	78.5	114	47	1.99	2.39	1.87	1.70	0	6	16	10	5
1931.....	74.9	106	44	4.97	4.03	5.66	5.21	0	9	15	9	7
1932.....	77.2	106	46	5.70	7.82	3.86	5.42	0	9	18	9	4
1933.....	75.4	103	48	3.82	4.32	3.80	3.33	0	9	13	10	8
1934.....	80.6	115	41	4.01	3.36	2.83	5.83	0	9	14	11	6
1935.....	77.7	110	45	2.20	1.60	2.73	2.26	0	6	17	9	5
1936.....	84.6	116	43	0.84	0.90	0.91	0.72	0	4	20	8	3
1937.....	80.5	105	51	2.05	2.50	2.00	1.64	0	5	17	11	3
1938.....	81.1	108	53	2.62	4.62	1.78	1.47	0	6	20	8	3
1939.....	75.4	106	45	4.80	6.30	3.76	4.34	0	9	15	11	5
Period.....	76.5	116	37	3.30	3.74	3.88	3.79	0	8	17	9	5



## Climatological Data for August 1939

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches				Number of days				Prevailing direction of wind	Observers		
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Length of record, years	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelted	With precip., .01 inch or more	Clear			Partly cloudy	Cloudy
Northern Division																					
Bethany	Harrison	916	44	72.9	- 2.1	93	7	50	21	34	46	4.71	+0.89	2.16	0	10	14	10	7	e.	A. S. Cumming
Brunswick	Chariton	652	58	74.8	+ 0.6	97	7	53	22	37	60	5.24	+1.30	1.80	0	9	15	9	7	ne.	O. K. Benecke
Canton, Lock & Dam 20	Lewis	488	1	74.2	.....	94	15	54	23	32	9	6.38	+3.22	2.29	0	12	17	3	11	se.	Lockmaster
Chillicothe	Livingston	779	30	73.6	- 1.9	94	7	52	21†	37	33	5.63	+1.67	2.38	0	8	20	6	5	sw.	Wm. J. Olenhouse
Clifton Hill	Randolph	731	40	73.0	- 3.0	93	7	51	21	28	30	5.16	+1.36	1.80	0	10	17	9	6	e.	Dr. A. J. Bradsher
Columbia	Boone	740	49	75.4	- 0.9	97	7	53	21	30	49	8.71	+5.11	4.39	0	11	10	15	6	e.	U. S. Weather Bureau
Conception	Nodaway	980	50	75.2	+ 0.5	104	5	50	21	36	55	2.94	- 0.70	0.82	0	12	11	16	4	nw.	Fr. Adelm Hess
Edgerton	Platte	856	19	74.8†	- 0.3	98	7	48	23	39	28	3.65	- 0.39	2.00	0	8	20	4	7	s.	Fred L. Stiff
Elsberry	Lincoln	449	8	73.4	.....	94	7	51	10	34	8	4.13	.....	1.25	0	10	14	12	5	nw.	Ray E. Mills
Fayette	Howard	760	59	74.2	- 1.7	95	7	50	23	31	56	8.10	+4.54	3.54	0	12	15	11	5	ne.	Irvin E. Schnell
Fulton	Callaway	818	51	74.4	- 2.0	101	7	52	5†	39	47	7.10	+3.45	2.88	0	10	15	12	4	ne.	Clyde C. Herrington
Grant City	Worth	1,134	35	72.8	- 2.1	92	3	46	21	38	47	4.43	+0.49	1.42	0	10	8	17	6	se.	Howard Rybolt
Hannibal	Marion	759	47	72.6	- 2.4	92	1†	52	23†	31	55	9.17	+5.83	1.40	0	14	15	4	12	sw.	Hannibal Water Dept.
Kansas City Airport	Jackson	741	50	77.0	+ 0.4	100	30	55	23	33	50	4.64	+0.55	2.21	0	11	11	13	7	e.	U. S. Weather Bureau
Kansas City Univ.	Jackson	908	1	76.1	.....	99	30	50	23	37	1	4.30	.....	1.64	0	8	7	16	8	sw.	University of Kansas City
Kidder	Caldwell	1,020	47	74.1	- 1.3	95	7	49	21	36	51	4.04	+0.08	1.62	0	11	21	4	6	se.	Mrs. Geraldine Terry
King City	Gentry	1,095	50	72.0	- 2.0	90	7	52	9	32	57	6.21	+2.09	1.65	0	10	6†	7†	4†	ne.	John M. Martin
Kirkville	Adair	969	50	72.0	- 2.0	90	7	52	9	32	57	6.21	+2.09	1.65	0	10	6†	7†	4†	ne.	Charles Noble
Lawson	Ray	1,070	1	74.6	.....	96	7	49	21	35	1	4.31	.....	2.75	0	12	11	17	3	ne.	Elmer E. Lamb
Linneus	Linn	816	45	72.2	- 2.7	93	7	50	10†	35	58	7.91	.....	4.06	0	10	18	10	3	sw.	H. D. Taggart
Louisiana	Pike	469	45	72.2	- 2.7	93	7	50	10†	35	58	6.41	+1.87	1.44	0	12	17	9	5	w.	Stark Bro's Nurseries
Macon	Macon	875	40	72.8	- 3.3	95	7	51	21	31	46	9.34	+5.53	3.76	0	10	17	9	5	sw.	Mrs. W. C. Brown
Maryville	Nodaway	1,169	49	74.2	+ 0.4	95	3	48	21	38	45	3.30	- 0.68	2.12	0	7	14	6	11	e.	R. B. Montgomery
Memphis	Scotland	787	0	73.0	.....	94	7	53	23	33	9	5.92	+1.95	1.57	0	12	12	6	13	sw.	John W. Alexander
Mexico	Andrew	800	50	74.1	- 1.9	100	7	51	23†	36	61	9.65	+5.80	1.95	0	12	12	6	13	sw.	Mrs. Abbie Snoddy
Moebly	Randolph	875	2	73.0	.....	94	7	51	21	38	2	5.47	.....	1.77	0	11	18	9	4	s.	McCormick Hospital
Oregon	Holt	1,048	83	76.0	+ 0.8	99	30	51	21†	36	83	2.35	- 1.45	1.33	0	5	21	9	1	nw.	Miss Mina Wright
St. Charles	St. Charles	520	51	76.4	- 0.4	98	7	57	21	29	61	8.56	+4.32	2.80	0	10	17	13	1	nw.	Martin L. Comann
St. Joseph	Buchanan	957	29	76.2	- 0.3	97	30	55	23	32	67	2.40	- 1.43	0.83	0	10	12	15	4	e.	U. S. Weather Bureau
Steffenville	Lewis	650	41	73.0	- 3.5	93	7	52	9	31	46	9.30	+5.26	2.62	0	13	17	11	3	n.	Frank Hall
Tarkio	Atchison	916	36	74.2	- 1.0	98	30	50	23	35	45	3.39	- 0.51	2.50	0	8	9	13	9	se.	Albert Volker
Trenton	Grundy	822	43	74.2	- 1.0	94	3	51	23	36	44	9.42	+5.54	5.04	0	10	16	8	7	s.	W. H. Estes
Unionville	Putnam	1,062	46	74.1	- 0.7	96	1	52	9†	37	46	5.20	+0.92	1.72	0	9	17	7	7	se.	John H. Schick
Warrenton	Warren	816	57	73.8	- 2.7	93	7†	53	21	31	49	5.14	+1.47	1.38	0	11	12	14	5	sw.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.	574	67	74.0	- 1.0	93	7	56	21	29	67	4.81	+1.61	1.45	0	12	12	11	8	e.	U. S. Weather Bureau
<b>Division means</b>	<b>and extremes</b>	.....	..	74.1	- 1.3	104	5	46	21	39	..	6.30	+2.66	5.04	0	10	14	11	6	e.	
Southwestern Division																					
Appleton City	St. Clair	813	44	77.3	- 0.5	102	6	48	21	40	47	4.88	+0.92	1.64	0	9	22	3	6	sw.	Rolla Brown
Bolivar	Polk	1,071	36	76.6	- 0.3	96	13	52	21	31	44	3.73	- 0.13	1.05	0	11	11	14	6	sw.	Southwest Baptist College
Boonville	Cooper	650	1	74.7	.....	98	7	54	19	30	62	9.97	+5.42	3.47	0	9	18	7	6	se.	Boonville Water Dept.
Clinton	Henry	786	46	76.8	- 0.8	99	6	49	21	37	52	3.51	- 0.14	1.16	0	13	13	13	13	ne.	U. S. Weather Bureau
Dean II	McDonald	1,000	35	77.2	- 0.5	101	6†	46	21	44	40	2.68	- 1.44	1.38	0	6	18	10	3	ne.	E. S. Taylor
Eldon	Miller	934	44	75.4†	- 1.0	98	7	53	21†	38	40	2.67	- 0.99	0.84	0	9	9†	12†	8†	ne.	E. H. Shepherd
Garber	Taney	950	5	76.4	.....	100	13	47	21	46	5	1.83	.....	0.37	0	7	7	11	13	e.	William H. Durham
Harrisonville	Cass	904	61	75.7	- 0.2	97	6	50	23	34	64	4.57	+0.39	1.49	0	8	8	11	12	ne.	John H. Patterson
Jefferson City	Cole	557	49	75.1	- 1.6	99	7	52	23	35	57	2.92	- 0.91	0.66	0	9	20	6	5	e.	Mrs. Frank Kliegel
Lakeside	Miller	595	8	76.4	.....	96	7†	52	21†	39	8	3.02	.....	1.00	0	10	10	10	10	ne.	W. S. Frame
Lamar	Barton	980	51	78.0	+ 0.3	100	13†	50	21	38	58	3.94	- 0.35	2.35	0	6	18	8	5	sw.	Jesse A. Mann
Lebanon	Laclede	1,265	51	75.2	- 0.9	96	6	50	21	35	52	4.77	+0.28	1.15	0	11	11	16	4	sw.	Mrs. Rosa E. Montelius
Lexington	Lafayette	688	54	75.7	- 0.5	96	7	54	21†	34	55	5.87	+2.35	1.68	0	8	21	8	2	sw.	Miss Carrie Loomis
Lockwood	Dade	1,078	33	78.1	+ 0.9	102	30	52	21	36	43	2.33	- 2.37	0.62	0	9	9	20	2	se.	Hubert A. Nieman
Marshall	Saline	779	52	75.0	- 1.0	95	7	54	23	36	49	7.93	+4.03	1.96	0	11	14	10	7	ne.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	38	75.8	+ 0.3	95	16	51	21	35	42	3.66	- 0.68	1.17	0	9	6	25	0	se.	Mo. Fruit Exp. Station
Mouth Vernon	Lawrence	1,174	27	77.0	+ 0.3	100	6†	48	21	39	39	2.83	- 1.65	0.78	0	8	6	24	1	sw.	G. H. Boswell
Neosho	Newton	1,011	52	77.2	+ 0.1	100	30	46	21	41	56	2.69	- 1.68	1.12	0	6	18	7	6	sw.	U. S. Fisheries Station
Nevada	Vernon	862	46	78.0	+ 0.9	103	30	48	21	41	47	2.28	- 1.49	1.14	0	9	25	1	5	ne.	Henry Kraft
Sedalia	Pettis	910	26	76.6	+ 0.1	99	6	51	23	33	28	4.32	- 0.86	1.70	0	11	16	11	4	ne.	Dr. J. E. Cannaday
Seligman	Barry	1,542	38	75.8	- 0.4	95	6	52	21	32	36	4.50	+0.50	2.70	0	4	16	13	2	e.	Floyd E. Fawver
Seymour (near)	Webster	1,642	33	74.0	- 1.0	93	13	47	21	36	33	3.41	- 0.83	1.30	0	10	14	11	6	se.	A. L. Hailey
Springfield	Greene	1,301	51	76.2	+ 0.5	95	6	52	21	31	51	3.60	- 0.49	1.24	0	10	10	14	7	e.	U. S. Weather Bureau
Versailles	Morgan	1,037	12	76.4	- 2.1	97	7	49	23	37	15	3.58	- 0.49	1.36	0	12	19	10	2	ne.	I. M. Wilson
Warrensburg	Johnson	878	52	76.6	- 0.5	98	7	52	21†	32	59	5.05	+1.08	1.84	0	10	14	13	4	sw.	E. A. Markey
Warraw	Benton	687	38																		



## Daily Precipitation for August 1939

Stations	Drainage-basins	Day of month																															Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Northern Division																																		
Amity <sup>1</sup>	Grand		.69				.15	T.	.79			1.85	.29	T.			T.		T.		.30	T.	T.	.05		T.						T.	4.12	
Bethany	do		2.16				.15	.43	.34			.16	.62	.22			.09		.22				.32										4.71	
Bowling Green <sup>1</sup>	Mississippi		.95	.45				.08	.17			.80	.75				1.22	.83	.82				.30		.03								6.40	
Brunswick <sup>1</sup>	Grand		.70				.14	.40				1.10	.40	.15				1.80	.10				.45		T.								5.24	
Canton, Lock No. 20 <sup>1</sup>	Mississippi		.65					.28	1.70	T.		2.29	.17	.16				.11	.12	.22	.05		.56		.07								6.38	
Centralla <sup>1</sup>	do		.80					.12				1.25	3.50					.89	.60				1.30										8.46	
Chillicothe <sup>1</sup>	Grand		2.38				.14	2.08				.22	.42					.33	T.				.05		.01								5.63	
Clifton Hill	Chariton		1.46				.12	.17				1.11	.80	.46				.02	.46	.11			.45										5.16	
Columbia <sup>1</sup>	Missouri		.22	.48			.08	.09			3.06	1.77	.17	T.			.59	1.05	.44	T.			.76										8.71	
Conception	do		T.	.10			.11	.22	.38			.24	.10	.23			T.		.04		.55	.03		.12		.82							2.94	
Edgerton	Missouri		.52					2.00				T.	.55	.41				.05					.12										3.65	
Elina <sup>1</sup>	Mississippi		.62				.09	.10	.84			2.04	.25					1.04	.02	.02			.27		.10								5.39	
Elsberry	do		.04	.48			T.	.22				.32	1.25					1.08	.08	T.			.13	.35	.18								4.13	
Farber <sup>1</sup>	do		1.04									1.02	1.14	.46				1.36	1.40	.11			.46										6.99	
Fayette	Missouri		.03	.52			.06	.07			.09	.54	.51					1.85	.60	.25	.03		.55										8.10	
Fulton <sup>1</sup>	do		.30				.02	.18	.12			.06	1.84					2.88	.77	.13			.80										7.10	
Gallatin <sup>1</sup>	Grand		1.45				.42	1.40				1.37	.32						.12				.22		.41								5.49	
Gorin	Mississippi		.46					.25	.61			T.	1.04	.15			1.65	.65	.18		.18		.22		.35								5.74	
Grant City	Grand		.03	1.39			.47	.83	.55			.46	.11	.26			T.			.18			.15										4.43	
Hannibal <sup>1</sup>	Mississippi		1.18	.16				.03	1.11	.01		1.36	1.22	.32				1.21	1.40	.71	.05	.02		.39									9.17	
Hermann <sup>1</sup>	Missouri		.41	.15			.04	T.	.08	.06		.02	1.03	.61	.01			.09	1.30	.12		.03		.92									4.87	
Kahoka <sup>1</sup>	Mississippi		.38					.45	1.10			T.	2.20	.15				.06	.12	T.			.54		.10								5.10	
Kansas City Airport <sup>1</sup>	Missouri		.62	.45		.06	.02	1.95	.26			.19	.33	.65				T.	T.	.10			.01		T.								4.64	
Kansas City University	do		.49	.38				1.61	T.			1.09	.37					T.		.01	.30		.02										4.30	
Kidder <sup>1</sup>	Grand		.63				.11	1.62	.01			.71	.44					.22		.06	.11		.06		.07								4.04	
King City	Missouri		.41				.21	.21	.38			.10	.75	.35					.95	.75		.15		.14		.20							2.91	
Kirksville	Mississippi		.95				.11	.04	1.02			1.40						.70	.95	.75													6.21	
LaBelle <sup>1</sup>	do		.80					.23	.88			2.57	.51					.86	.21	.11	.51		.29										6.97	
Lawson	Missouri		.06	.45			.30	1.08	1.67			.07	.31	.20					.08	.02			.05		.02								4.31	
Linneus <sup>1</sup>	Grand		4.06				.20	1.08				1.16	.30	.06					.86	.09			.09		.01								7.91	
Louisiana	Mississippi		.05	1.20			.05	.20				1.05	1.10					.90	1.00	.44			.24		.18								6.41	
Lucerne <sup>1</sup>	Grand		1.01				.17	1.02	.04	.05		1.15	.08				.18	.11	.01				.33		.44								5.67	
Macon <sup>1</sup>	Chariton		3.76				.14	.76	.05			1.46	.86						1.76	.06	.04	T.		.45		T.							9.34	
Madison <sup>1</sup>	Mississippi		1.24				.06	.04	.04			.94	1.74					1.40	.55	.53	.11		.65										7.26	
Maryville	Missouri		.02	.04			.42	1.70	.42		T.	T.	.61				T.						.09										3.30	
Memphis <sup>1</sup>	Mississippi		.24				.05	.58	.50			1.57	.20	.04				1.39	.71	.01	.22		.43		.03								5.92	
Mexico <sup>1</sup>	do		.56				.05	.28	.15			1.32	1.31	.03				1.05	1.95	.05			1.75		1.15								9.65	
Millan <sup>1</sup>	Grand		1.26				.22	.03	1.08	.02		1.80	.68					.31	.42	.55			.31		.07								6.75	
Moberly	Mississippi		.84				.05	.50			.45	1.77	.67					.20	.17	.29			.48		.05								5.47	
Monroe City	do		4.09				T.	.53				1.56	.54					3.97	1.31	.52	.11		.37		.04								13.04	
Orwgon	Missouri		.20				.07	T.	.40			1.33	.35									T.											2.35	
Palmyra <sup>1</sup>	Mississippi		.90	.11			T.	1.16				1.10	.96	.29				.40	.80	.70	.12		.30										6.84	
Paris <sup>1</sup>	do		.68	.30			.11	.55				.45	1.25					1.54	1.08	.39	.37		.38										7.10	
Perry <sup>1</sup>	do		2.50	.25					.15	.25		.90	1.30					1.07	1.40				.47										8.29	
Philadelphia <sup>1</sup>	do		1.65						1.32			1.70	.15					3.30	.95	1.20	.12		.12										10.51	
St. Charles <sup>1</sup>	Missouri		.84	.21						.01		1.21	2.55	.11				3.30	.95	1.20	.12		.77		.01								8.56	
St. Joseph <sup>1</sup>	do		.28	.50		.13	T.	.32	.01			.76	.08	.25			.02			T.	T.		.05										2.40	
Saverton, Lock No. 22 <sup>1</sup>	Mississippi		1.70	T.			T.	1.10	.08			1.19	2.34	.23				1.31	2.88	.20	T.		.49										11.52	
Shelbina	do		3.90				.15	.57				1.18	1.76						.71	.65	.92		.18										10.02	
Shelbyville <sup>1</sup>	do		3.10					1.26				1.05	1.15						.83	.63		.05		.05									.06	8.13
Steffenville <sup>1</sup>	do		.78	.90			.10	.15	1.65			2.62	.85					.90	.56	.20	.11		.43		.05		T.						9.30	
Tarkio	Missouri		.05				.92	1.58				.16					.08	.35			.15		.10										3.39	
Trenton	Grand		T.	5.04			.24	1.14		1.15	.82	.29					.20		.08			.17		.29									9.42	
Troy <sup>1</sup>	Mississippi		.70	.05			.01			.04		.45	.85	.3																				



## Daily Precipitation for August 1939—Continued from preceding page

Stations	Drainage-basins	Day of month																															Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>Southeastern Division—</i>		<i>Concluded</i>																																
Bragg City <sup>2</sup>	St. Francis		T.							T.	.49				T.							.40		.81									1.70	
Campbell	do	.05					.44		.04	.34			1.27	.12	.37			.08	.61			.16		.79		.03							4.30	
Cape Girardeau <sup>2</sup>	Mississippi		.68						.22					.15		.28			.11	.08		.05		1.19	.01	.01	.08						2.86	
Carntherville <sup>2</sup>	do		.30								.28								.15		.13		1.12		.02								2.00	
Centerville <sup>2</sup>	Black	.05							.02			2.73		.01									2.10										4.91	
Crystal City <sup>2</sup>	Mississippi	.57	.62						.03		T.	.76	1.23						1.53			.62		.59		1.05							7.00	
Cuba <sup>2</sup>	Meramec	.27										.83	.38						.32			.60		.85									3.25	
Dexter <sup>2</sup>	St. Francis		T.				.78		.77				1.02						.35	.25		.79				.80							4.76	
Doniphan	Black							.43	.07			.60	1.43						.04					.84		.10	.02						3.53	
Farmington	St. Francis	.34						.16				.20	.84					.32	.49	T.	.89		.50	.98									4.32	
Fisk <sup>2</sup>	do	.13	T.						.11	.03				.33	.09					T.	.13	.09		.93		T.	T.						1.84	
Fredericktown <sup>2</sup>	do		.31						.45			1.46							.10		.23		1.08		T.	T.							3.63	
Goodland	Black	.45									.18	2.06								.09	.05			.38									3.21	
Greenville	St. Francis	.62						.21				.68							.14	.20			1.68										3.63	
Jackson	Mississippi	.21						.21				.14						.13	.33		.09		1.31		.11								2.53	
Jerome <sup>2</sup>	Gasconade	.14	.05						.07			2.60							.33	.13		.13		1.00		.08							4.52	
Koshikouong	Black	T.	T.					.40		.08	.03	T.	1.99	.02					.03								.40						2.55	
Leeper <sup>2</sup>	do	.20								T.		.80	.28	.05							.40	.75		.97									3.85	
Licking (near)	Gasconade	.12							.10			.69	2.02	.27				.49	.04	T.			.65	T.									4.38	
Marble Hill	Mississippi	.10						.45				.30						.40		.10	.10			2.85		.10							4.40	
Meramec Park <sup>2</sup>	Meramec	.33									.71	.69	.41						.61				.80										2.84	
Morehouse	Mississippi	.05				.02					.71	1.84	.40							.28		.04		.78		.08							4.20	
New Madrid <sup>2</sup>	do		.11			T.	.82				.38	.12			.08		T.					.11	1.14	T.		.04							2.80	
Owensville <sup>2</sup>	Gasconade											.58												.68									1.26	
Pacific <sup>2</sup>	Meramec	.63	T.									1.70						2.70					1.20										6.23	
Parma <sup>2</sup>	St. Francis		.25							.93				1.58	.33							.32		.70									4.11	
Poplar Bluff <sup>2</sup>	Black		T.				.06			.40			.30	T.	.23					.37	T.	.03		1.27									2.66	
Richwoods <sup>2</sup>	Meramec		.40									2.20							3.00	.07			1.67										7.84	
Rolla	do	.07	.13				.03		.03			1.28	.03					.04	1.39	.01	T.		.60	.21		.10	.01						3.93	
St. Louis <sup>1†</sup>	Mississippi	.57					T.	T.	.25			1.29	.59				T.	1.41	.95	.06	.75		.67		3.52								10.06	
St. Louis Airport <sup>3†</sup>	Missouri	.99					T.		.16			2.34	.74				.04	1.89	.46	.04	T.		.60	.02	.34								7.62	
St. Louis University <sup>3†</sup>	Mississippi	.48					T.	T.	.25			1.47	.37				.03	1.52	.76	.13	1.06		.55		3.99								10.61	
Salem <sup>2</sup>	Meramec	.68	.12						.03			5.79	.39					.05	.25			.20		1.32				.08						8.91
Sikeston <sup>2</sup>	Mississippi	.5	.09				.16	T.			.62	.04			.72	T.	.43			.07	.01		.02		.93	.02		.06					3.17	
Union	Meramec	.25										.15	.32	.04				2.26		.37		.61	.32										4.32	
Valley Park <sup>2</sup>	do	.60	.28					T.		.34		.40	1.20	.32				3.05	T.		.37		.72		1.50	.06							8.84	
Van Buren	Black							.40				.61	.53	.17						.51		.94											3.16	
Wappapello Dam <sup>2</sup>	St. Francis	.11							.15			.66	.25	.20				.06	.10	.02	.06		1.11										2.72	
Washington Univ. <sup>2†</sup>	Mississippi	.40	.04					.04		1.11		2.41	.27	.07				5.55			.72		.75		1.39		.35	T.					11.58	
West Plains	Black	T.						T.	T.		T.	.77	T.					.36	.08		.03	.16		1.21									3.50	
Williamsville <sup>2</sup>	do	.54							.18			.69	.02	1.14		.16					.14	.16		1.21									4.24	
Willow Sprgs. (near) <sup>2</sup>	White	T.							.18			.52		.08				.47	.07		.20		3.04				.05						4.61	
Zalma (near) <sup>2</sup>	Mississippi								.10			.28	.18	.20							.10		1.37				.53						2.76	
Cairo, Ill. <sup>1†</sup>	do	.09				T.			.46	.02			.02		.03	T.	T.		T.	.01	T.		.46	.13		T.							1.22	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation.

<sup>1</sup> First-order Weather Bureau station; precipitation is for the 24-hour period, midnight to midnight, unless otherwise indicated. <sup>2</sup> Precipitation is measured in the morning; amount then recorded is for the preceding 24 hours. <sup>3</sup> Precipitation is for 24-hour period, midnight to midnight. <sup>†</sup> Precipitation measured with recording gage. <sup>\*</sup> Included in next measurement. <sup>T</sup> Trace, or precipitation less than 0.01 inch. <sup>‡</sup> Estimated. <sup>||</sup> Partially estimated. <sup>||||</sup> Incomplete.

NOTE:—In addition to the stations shown on daily temperature page, records of daily temperatures are kept at the following stations in Missouri: Advance, Appleton, City, Bethany, Bolivar, Booneville, Campbell, Canton Lock No. 20, Clifton Hill, Columbia Airport, Conception, Dean, Edgerton, Elsberry, Fulton, Goodland, Greenville, Kansas City University, Kidder, Kirksville Airport, Koshkonong, Lakeside, Licking (near), Lockwood, Marble Hill, Memphis, Mount Vernon, St. Joseph Airport, St. Louis Airport, St. Louis University, Saverton Lock No. 22, Seligman, Seymour (near), Springfield Airport, Steffenville, Tarkio, Versailles, Wappapello Dam, Warsaw, and Washington University.

## Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for August 1939

(See precipitation data in daily precipitation table)

Station	Data	Day of month																															Monthly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Columbia.....	{ Evaporation .....	.213	.083	.179	.206	.253	.207	.306	.173	.058	.226	....	.082	.151	.215	.173	.148	.057	.047	.009	.138	.156	.182	.028	.210	.099	.169	.171	.189	.143	.275	.113	4.814
	{ Mean temperature .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
	{ Wind movement .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Lakeside ..... (Osage Dam)	{ Evaporation .....	.289	.216	.327	.333	.310	.273	.308	.397	.090	.258	.254	.205	.372	.269	.316	.287	....	.061	.075	.177	.272	.270	.294	.234	.139	.263	.238	.287	.242	.246	.264	7.818
	{ Mean temperature .....	78	82	76	77	75	80	84	74	70	76	82	82	80	79	78	80	74	72	76	74	68	72	70	72	79	80	75	71	74	78	79	76.4
	{ Wind movement .....	25	41	56	42	25	25	42	80	37	42	53	47	37	20	33	23	38	31	28	23	44	41	40	20	15	31	35	29	8	20	40	1,071
St. Louis ..... (Washington University)	{ Evaporation .....	.230	.220	.070	.271	.248	.237	.074	.282	.220	.157	.243	.152	.126	.224	.227	.192	.149	....	.148	.172	.196	.195	.191	.196	.186	.144	.190	.185	.164	.157	.160	5.794
	{ Mean temperature .....	80	80	78	76	74	74	83	80	72	72	78	76	80	82	84	82	82	72	74	76	68	70	72	74	76	75	70	72	73	76	76	76.0
	{ Wind movement .....	22	28	26	23	19	23	29	33	43	22	27	26	36	16	27	22	18	46	38	26	34	24	89	16	26	18	18	18	17	15	11	786



## Daily Temperatures for August 1939

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
Northern Division																																		
Brunswick §§.....	Maximum...	93	90	93	90	90	86	97	73	84	91	88	89	90	92	91	92	76	75	87	76	83	82	83	86	89	88	88	85	90	90	91	87.0	
.....	Minimum...	65	72	64	63	61	61	68	71	54	54	62	67	67	64	64	68	68	67	66	66	54	53	54	55	59	66	62	59	59	60	65	62.5	
Chillicothe §§.....	Maximum...	83	90	91	88	88	89	94	76	82	90	84	86	86	89	87	83	79	85	77	84	81	85	84	85	84	84	81	89	90	88	85.5		
.....	Minimum...	63	67	59	59	59	67	72	70	54	53	62	65	62	60	68	73	69	65	61	66	52	57	53	52	62	65	59	57	57	60	69	61.8	
Columbia.....	Maximum...	93	89	88	89	89	87	97	77	83	88	92	91	89	89	89	91	75	75	84	83	82	88	82	85	90	86	84	85	87	91	89	86.7	
.....	Minimum...	72	72	64	64	62	68	76	60	55	62	65	69	72	63	63	67	67	67	65	57	53	58	54	57	68	68	63	58	60	66	69	64.0	
Fayette.....	Maximum...	93	89	89	87	89	86	95	88	81	85	90	90	86	87	88	90	77	73	82	80	80	85	80	84	87	83	83	84	87	88	87	85.6	
.....	Minimum...	62	72	60	62	58	66	74	67	54	61	65	64	72	62	64	67	67	66	64	66	53	54	50	57	66	66	60	56	57	62	69	62.7	
Grant City.....	Maximum...	84	87	92	87	88	88	90	71	80	85	80	85	85	89	82	77	81	84	87	75	84	72	84	82	83	84	86	80	91	91	88	83.9	
.....	Minimum...	72	68	56	60	59	65	66	62	51	62	65	63	59	60	68	69	64	65	60	60	46	58	50	66	63	63	60	58	62	66	69	61.8	
Hannibal.....	Maximum...	92	86	83	82	82	81	92	85	78	78	86	85	81	86	89	89	83	71	81	82	75	85	78	85	84	79	80	83	84	85	86	83.1	
.....	Minimum...	65	69	60	61	61	63	66	66	55	57	64	65	66	63	69	70	66	63	62	64	53	57	52	60	64	63	59	52	60	62	65	62.1	
Kansas City Airport.....	Maximum...	83	91	92	90	90	98	96	73	83	90	84	89	87	89	87	88	82	80	88	76	85	80	88	91	87	86	89	96	100	89	87.6		
.....	Minimum...	72	70	65	69	69	69	70	64	58	68	68	64	71	68	72	71	69	65	63	61	56	60	55	67	66	68	65	64	70	73	66.5		
Kirkville.....	Maximum...	89	86	87	..	..	..	90	87	79	82	82	..	83	86	87	..	..	74	..	82	76	74	..	..	..	..	..	..	..	85	..	83.0	
.....	Minimum...	66	68	61	..	57	..	64	66	52	59	64	..	62	57	63	..	..	65	..	60	53	56	..	..	..	..	..	..	..	53	..	60.9	
Lawson.....	Maximum...	87	91	92	88	90	92	96	74	80	89	84	87	88	89	89	84	80	78	86	76	83	80	85	83	86	86	87	91	94	89	86.1		
.....	Minimum...	71	70	57	62	61	64	69	63	54	63	67	64	65	65	69	69	65	65	68	58	62	49	60	51	61	63	66	63	60	63	67	69	63.1
Louisiana.....	Maximum...	92	85	87	90	85	83	83	82	83	80	80	83	90	88	89	90	80	80	80	80	80	80	80	80	87	83	84	83	85	85	86	87	84.0
.....	Minimum...	57	67	62	62	60	67	70	52	50	65	67	66	66	68	66	68	65	65	60	55	52	53	57	66	64	53	52	50	56	63	60.3		
Macon§§.....	Maximum...	93	89	90	87	87	84	95	74	82	85	87	88	85	87	88	90	74	74	85	80	80	83	81	83	85	82	81	82	86	87	86	84.5	
.....	Minimum...	66	67	59	62	59	65	67	69	53	53	64	64	63	60	63	70	64	64	63	65	51	56	52	59	63	62	57	54	56	59	65	61.2	
Maryville.....	Maximum...	84	90	95	92	92	93	91	72	80	87	82	84	85	89	83	78	84	85	88	78	82	78	84	82	85	85	86	83	92	93	90	85.5	
.....	Minimum...	72	68	57	65	62	64	66	66	55	52	63	65	63	62	65	69	69	65	64	62	59	48	60	51	58	64	64	63	61	65	68	70	62.9
Mexico§§.....	Maximum...	97	90	89	86	88	85	100	80	82	90	94	92	87	88	90	91	73	74	83	86	87	90	82	86	89	85	84	81	87	90	88	87.0	
.....	Minimum...	63	71	60	61	56	64	66	71	54	56	64	64	70	59	60	65	68	65	63	64	54	54	51	59	66	63	56	54	51	60	64	61.2	
Moberly.....	Maximum...	89	87	90	90	89	82	94	88	85	85	89	87	84	91	87	92	76	72	83	80	79	86	81	88	90	86	79	85	89	91	89	85.9	
.....	Minimum...	64	69	58	61	62	64	66	65	55	55	64	66	68	58	61	56	65	64	62	64	51	55	52	58	63	62	56	52	53	53	64	60.2	
Oregon.....	Maximum...	85	92	96	93	94	98	98	77	85	91	84	89	91	92	82	83	86	83	95	81	87	74	88	88	87	88	91	89	97	99	92	88.9	
.....	Minimum...	70	68	60	61	63	67	70	60	54	65	63	63	66	69	68	64	65	62	60	51	51	52	62	64	64	64	63	68	70	70	63.2		
St. Charles §§.....	Maximum...	93	89	92	89	89	86	98	85	85	85	87	87	90	91	90	94	93	84	73	82	88	86	85	88	88	85	86	88	89	87	87.7		
.....	Minimum...	65	70	69	65	60	66	70	73	62	59	67	66	67	66	67	70	71	67	67	64	57	58	60	69	69	60	61	64	66	65.1			
St. Joseph.....	Maximum...	81	91	93	91	91	96	95	76	82	90	78	86	88	91	81	86	85	83	87	75	85	75	87	86	88	88	87	88	94	97	92	87.0	
.....	Minimum...	70	70	61	67	68	69	71	61	56	66	68	65	68	72	69	67	67	67	67	61	58	56	60	55	65	66	67	65	64	67	70	65.4	
Trenton.....	Maximum...	90	89	94	90	89	86	93	76	82	86	84	87	86	89	87	89	83	78	88	83	86	76	87	81	84	83	84	85	89	88	87	85.8	
.....	Minimum...	70	66	61	64	60	66	67	65	54	62	66	65	62	61	68	71	66	65	62	67	53	55	51	57	65	66	60	56	59	67	66	62.7	
Unionville §§.....	Maximum...	96	92	95	93	90	85	95	79	84	88	89	87	92	94	90	73	81	93	81	83	71	83	82	85	85	85	90	92	89	87	87.1		
.....	Minimum...	68	66	58	62	60	64	68	52	59	63	64	59	61	67	70	65	64	61	64	52	52	52	57	60	62	58	57	57	62	67	61.1		
Warrenton.....	Maximum...	88	85	85	85	87	87	93	82	86	88	82	86	86	86	88	88	77	80	80	84	79	84	84	84	84	82	84	85	93	87	87	85.0	
.....	Minimum...	66	69	64	64	58	63	70	70	59	55	66	67	71	61	64	66	68	65	64	64	53	55	55	57	68	64	57	55	60	62	62	62.6	
Keokuk, Iowa.....	Maximum...	92	90	91	87	87	79	93	76	81	82	85	86	84	86	89	92	72	75	83	80	78	79	82	86	83	81	83	84	86	86	84.0		
.....	Minimum...	68	71	62	67	66	65	65	62	57	60	64	68	66	67	68	72	66																



*Continued from page 38*

County and between Crane and Marionville in Stone and Lawrence counties respectively; trees and corn were blown down, cottages and roofs damaged, and power and telephone service disrupted. Also on the 13th in Barton County, seven miles southwest of Lamar, where high winds drove rain and hail into homes through damaged roofs and windows. 22d, at Appleton City where trees and wires were broken and buildings damaged. 23d, at Morehouse with considerable damage to trees. 24th, in Jasper County; at Duenweg roofs were damaged, and four miles northwest of Carthage power lines and barns were damaged by wind. 25th, at St. Louis with damage to trees.

#### HAILSTORMS

A heavy hailstorm, accompanied by torrential rain and high wind, struck the neighborhood of Rosebranch, seven miles southwest of Lamar, in Barton County, at 5 p. m., on August 13th, resulting in thousands of dollars damage to crops and property. Stones ranged in size from small to as large as hen eggs, and fell over an area about four miles square, for about one-half hour. Chickens were killed or crippled, peach trees stripped of fruit which was just beginning to ripen, blades of corn stripped off the stalks, leaves of cowpeas and soybeans beaten off the stems, watermelons and tomatoes punctured and battered, and automobile tops, roofs, and windows were penetrated by the hailstones.

A very heavy and severe hailstorm, accompanied by high wind, driving rain, and damaging lightning, moved out of southeastern Kansas and northeastern Oklahoma into northwestern Newton, Jasper, and Dade Counties of Missouri, between four and five p. m., on August 24th, with severe damage estimated at approximately \$1,000,000. Places suffering heaviest damage were Tipton Ford, Newton County; Carthage, Cartersville, Duenweg, Jasper, Joplin, Oronogo, Webb City, all in Jasper County; four miles north of Greenfield, Dade County. At Carthage the damage was estimated at \$150,000 and at Joplin the insurance loss was estimated at \$250,000. Two persons suffered minor injuries at Joplin by being struck by hailstones, while poultry, calves, dogs, and a goat were reported killed by the stones and chunks of ice, which were as large as baseballs, and some up to ten and twelve inches in circumference and weighing one pound and over. Crops, roofs, window and plate glass, neon signs, automobiles, trees, greenhouses, fruits, and vegetables all suffered severe damage in the affected area. The

storm path was from four to thirty-five miles in width and moved from southwest to northeast in the southwestern portion of the storm area and from the northeast and east to southwest in the northeastern portion. This was the the second severe hailstorm to strike in the above area since the first of April.

#### EXCESSIVE PRECIPITATION

On the 10-11th excessive and heavy rainfall occurred at Columbia flooding basements, streets, and caused overflow of creeks in the vicinity, damaging corn in the low places. 4.39 inches of rain were recorded in a 24-hour period, the heaviest 24-hour amount of record for August.

On the 13th torrential rains of cloudburst proportions, accompanied by damaging winds, occurred at Rockaway Beach, on Lake Tanecomo, in Taney County; also between Crane and Marionville, in Stone and Lawrence counties, respectively, and in the Rosebranch neighborhood, seven miles southwest of Lamar, in Barton County. Estimates of two and three inches, falling in about fifteen to twenty minutes, were reported from Rockaway Beach and between Crane and Marionville. Traffic was stopped by the blinding sheets of rain and in the Marionville district highways were under water. Heavy damage by soil erosion resulted in the two areas. In the Rosebranch neighborhood, the rainfall, accompanied by heavy hail and wind, was estimated at three to four inches and caused the small branch running through the neighborhood to be higher than the oldest residents had ever seen it.

During the early morning of August 25th a very heavy and destructive rainstorm, accompanied by light hail, damaging wind, and severe thunder and lightning, struck the city of St. Louis, flooding basements and streets, blocking traffic, and disrupting power and communication service, and resulting in hundreds of thousands of dollars damage. In one block alone the damage was estimated at \$100,000.

#### DESTRUCTIVE LIGHTNING

Considerable damage was done by lightning at Columbia on the 11th and 12th to power and communication lines, trees and buildings, and to livestock.

On the 16th one man was killed by lightning near Melbourne, and another was struck and killed on the 24th south of Stockton.

#### ERRATA

July 1939, page 34: date of minimum temperature at West Plains should be 31; date of maximum temperature at Clinton and Rolla should be 15 and 18 respectively; greatest precipitation in 24 hours at Clinton should be 0.46.



## CLIMATOLOGICAL DATA

## MISSOURI SECTION

W. J. MOXOM  
ST. LOUIS, MO.

Vol. XLIII

SEPTEMBER 1939

No. 9

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## GENERAL SUMMARY

This was the warmest September of record. The average temperature for the State was  $75.5^{\circ}$ , which is  $6.1^{\circ}$  above normal, and exceeds by  $0.5^{\circ}$  the record of the previous warmest September which occurred in 1931. It was consistently warm throughout the month, except a general cool period at the close, with minima ranging from  $30^{\circ}$  to  $37^{\circ}$ . Maxima ranged from  $106^{\circ}$  to  $108^{\circ}$  throughout the State. The highest temperatures ever recorded in September occurred at several stations, and in most areas they were never so high so late in the season.

The month was unusually dry, the average precipitation for the State was only 20 per cent of the normal, and it was the third driest September during the past 52 years. The northern division averaged 10 per cent of the normal, southwestern 18 per cent, and the southeastern 35 per cent. The latter part of August marked the beginning of a serious drought which continued to the close of September, when it was only temporarily broken. The rains during the last two days were fairly general, but were insufficient to restore very much of the soil moisture.

River stages were very low. At St. Louis the average stage for the month was 1.4 feet below zero, which is the lowest September average, years 1861 to 1939, inclusive. At 2:00 p. m., September 28th, a stage of -3.79 feet was recorded, which is the lowest September stage of record. There was a serious shortage of stock water throughout the rural districts.

All growing crops deteriorated. The hot, dry winds caused corn to mature too rapidly. The late-planted was seriously damaged and was generally light and chaffy. By the close of the month practically all of the crop was safe from frost, and in some areas cribbing had begun. Ground was too hard and dry for plowing and the seeding of wheat was suspended. Pastures and ranges were very poor and milk flow probably cut one-half. The unseasonably high temperatures and drought seriously damaged the late apple crop.—H. C. G.

## TEMPERATURE

The monthly mean for the State, 84 stations reporting, was  $75.5^{\circ}$ , or  $6.1^{\circ}$  above normal. The highest monthly mean was  $79.4^{\circ}$  at Lockwood, and the lowest monthly mean was  $71.4^{\circ}$  at Macon. The highest recorded was  $108^{\circ}$  at Dean on the 2d and at Conception and Garber on the 3d, and the lowest was  $30^{\circ}$  at Edgerton and Grant City on the 30th. The greatest daily range was  $56^{\circ}$  at Greenville on the 23d.

## PRECIPITATION

The average for the State, 144 stations reporting, was 0.81 inch, or 3.23 inches less than normal. The greatest local monthly amount was 3.65 inches at Doniphan, and the least local monthly amount was 0.12 inch at Steffenville. The greatest amount in any twenty-four hours was 3.65 inches at Doniphan on the 29-30th. The average number of days with 0.01 inch or more was 2.

## MISCELLANEOUS PHENOMENA

Dust.—Locally on 3d, 6th, 7th, 11th, 28th.  
Fog.—Dense, 27th.  
Frost.—Light, 30th; heavy, locally on 30th; killing, locally on 30th.  
Halos.—Solar, 1st, 4th, 11th, 15th, 24th, 25th; lunar, 28th, 29th.

Thunderstorms.—Local, 3d, 4th, 9th, 10th, 16th, 17th, 28th, 30th; more or less general, 29th.

Windstorms.—At Maryville on 6th and 7th with many tree limbs broken.

## LIGHTNING

One man was killed by lightning in Polk County on the 16th.

## ERRATA

February 1939, page 7: Greatest precipitation in twenty-four hours at Appleton City and Andalia should be 0.62 and 0.92 respectively.

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind				Relative humidity			Percentage of sunshine
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12:30 p. m.	6:30 p. m.	
Columbia.....	29.99*	30.28	19	29.61	3	7.3	21	sw.	3	72*	39*	48*	75
Kan. C. Airport.	29.97	30.32	30	29.55	3	8.5	34	sw.	3	69	35	34	83
St. Joseph.....	29.97*	30.31*	17	29.49*	3	8.7	27	sw.	3	75*	37*	40*	86
St. Louis.....	30.00*	30.30*	18	29.70*	29	10.6	30	s.	3	66*	41*	42*	90
Springfield.....	30.00*	30.31*	19	29.69*	29	7.7	24	w.	3	78*	42*	48*	86
Cairo, Ill.....	30.00	30.26	19	29.75	26	6.8	20	n.	30	74	44	49	91
Keokuk, Iowa..	29.99	30.34	18	29.58	3	7.2	22	s.	3	75	44	44	81

\* Data for Airport Station.

## COMPARATIVE DATA FOR SEPTEMBER

Year	Temperature			Precipitation						Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Average for State	Snowfall, State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy
1888.....	65.2	97	28	1.01	1.13	0.87	1.02	0	4	..	..	..	..
1889.....	64.7	94	32	4.68	5.55	4.66	3.83	0	11	..	..	..	..
1890.....	63.7	98	30	4.36	3.25	5.49	4.34	0	9	..	..	..	..
1891.....	70.6	104	34	0.72	0.53	0.90	0.72	0	6	..	..	..	..
1892.....	67.8	97	32	2.46	2.73	2.71	1.93	0	4	19	6	5	..
1893.....	69.9	107	26	4.07	3.50	3.96	4.74	0	6	17	7	6	..
1894.....	68.5	101	34	4.94	4.16	6.42	4.23	0	8	13	11	6	..
1895.....	71.8	104	24	2.38	2.04	2.42	2.66	0	4	19	8	3	..
1896.....	65.0	101	28	4.09	4.67	3.93	3.69	0	10	11	10	9	..
1897.....	74.3	105	27	0.67	0.97	0.61	0.43	0	2	23	5	2	..
1898.....	70.9	103	37	6.70	6.76	7.25	6.10	0	9	15	9	..	..
1899.....	67.4	108	21	1.96	2.27	1.79	1.81	0	4	20	6	4	..
1900.....	71.1	100	29	4.59	4.77	5.56	3.44	0	10	13	10	7	..
1901.....	68.9	103	27	2.16	2.41	2.75	1.31	0	6	18	8	4	..
1902.....	63.2	95	30	4.63	4.74	5.36	3.79	0	10	15	6	9	..
1903.....	66.6	98	32	4.16	5.64	3.56	3.28	0	8	17	6	7	..
1904.....	69.6	96	34	3.77	4.72	2.78	3.82	0	7	16	8	6	..
1905.....	69.6	98	41	7.40	8.20	8.36	5.64	0	10	15	6	9	..
1906.....	71.9	98	36	4.53	3.54	3.75	6.31	0	11	15	8	7	..
1907.....	68.9	101	31	2.06	2.35	1.62	2.20	0	6	18	7	5	..
1908.....	71.6	99	28	2.15	1.49	2.69	2.27	0	4	18	8	4	..
1909.....	68.7	105	28	4.48	5.30	3.35	4.79	0	8	18	6	6	..
1910.....	69.5	97	34	5.45	5.90	6.44	4.01	0	10	14	6	10	..
1911.....	73.7	105	39	6.27	8.17	5.98	4.65	0	11	13	7	10	..
1912.....	68.6	105	27	3.11	2.72	2.87	3.74	0	6	17	5	8	..
1913.....	69.4	109	27	4.75	3.74	4.64	5.88	0	9	13	7	10	..
1914.....	69.6	99	35	6.06	7.19	6.01	4.98	0	9	15	8	7	..
1915.....	70.6	98	34	5.18	6.21	6.93	2.40	0	7	16	7	7	..
1916.....	67.8	101	27	2.97	2.73	3.18	2.99	0	6	19	7	4	..
1917.....	67.9	101	33	2.76	2.97	3.64	1.66	0	5	19	6	5	..
1918.....	62.3	96	29	4.83	4.11	5.44	4.95	0	7	17	6	7	..
1919.....	71.4	104	38	3.14	4.13	1.95	3.34	0	5	20	6	4	..
1920.....	70.0	100	31	4.60	4.37	5.78	3.64	0	9	17	7	6	..
1921.....	73.4	104	34	6.94	8.05	7.03	5.74	0	13	13	9	8	..
1922.....	71.7	107	31	3.10	3.95	3.62	1.74	0	5	21	5	4	..
1923.....	68.7	98	33	4.44	4.84	4.75	3.74	0	11	12	9	9	..
1924.....	64.0	96	29	3.79	3.41	4.55	3.40	0	8	14	8	8	..
1925.....	74.6	110	45	6.56	5.84	6.48	7.37	0	10	14	6	10	..
1926.....	69.3	97	27	8.64	11.74	9.12	5.06	0	13	12	7	11	..
1927.....	71.6	102	29	3.72	3.11	3.41	4.65	0	8	17	7	6	..
1928.....	65.0	95	28	2.50	5.36	1.62	0.53	0	5	20	7	3	..
1929.....	67.4	98	33	3.16	3.16	2.83	3.48	0	8	13	10	7	..
1930.....	71.3	105	37	4.28	2.86	5.48	4.49	0	8	16	7	7	..
1931.....	75.0	104	36	3.91	5.97	3.18	2.58	0	7	19	7	4	..
1932.....	67.8	99	33	2.56	2.08	2.04	3.57	0	6	17	8	5	..
1933.....	74.6	102	36	4.69	3.00	4.92	6.16	0	9	16	8	5	..
1934.....	65.6	95	32	7.39	7.49	7.79	6.89	0	12	12	8	10	..
1935.....	68.1	98	33	3.51	4.30	3.13	3.10	0	6	20	4	6	..
1936.....	73.6	109	37	8.62	8.76	9.98	7.12	0	11	11	7	10	..
1937.....	69.4	103	29	2.41	1.12	2.53	3.57	0	5	18	7	5	..
1938.....	71.6	103	30	1.85	1.51	2.40	1.65	0	6	18	7	5	..
1939.....	75.5	108	30	0.81	0.42	0.74	1.27	0	2	23	5	2	..
Period.....	69.4	110	21	4.04	4.23	4.22	3.67	0	8	16	7	7	..

NAT.  
HIST.



## Climatological Data for September 1939

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches				Number of days			Prevailing direction of wind	Observers			
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Length of record, years	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelted	With precip., .01 inch or more			Clear	Partly cloudy	Cloudy
Northern Division																					
Bethany.....	Harrison.....	916	44	73.2	+ 6.1	105	3	31	30	46	46	0.38	-4.18	0.38	0	1	24	4	2	sw.	A. S. Cumming
Brunswick.....	Chariton.....	652	58	74.3	+ 7.3	104	3	37	30	51	60	0.50	-4.31	0.40	0	3	22	5	3	sw.	O. K. Benecke
Canton, Lock & Dam 20	Lewis.....	488	1	73.1	.....	101	7	37	30	41	9	0.20	-3.54	0.17	0	3	26	1	3	s.	Lockmaster
Chillicothe.....	Livingston.....	779	30	73.6	+ 6.1	105	3	34	30	46	33	0.40	-4.38	0.40	0	1	24	6	0	ne.	Wm. J. Olenhouse
Clifton Hill.....	Randolph.....	731	40	72.3	+ 3.7	101	3	34	30	40	30	0.30	-4.24	0.30	0	1	22	7	1	sw.	Dr. A. J. Bradsher
Columbia.....	Boone.....	740	49	75.4	+ 6.0	103	3	38	30	41	49	0.58	-3.77	0.41	0	3	19	9	2	s.	U. S. Weather Bureau
Conception.....	Nodaway.....	950	50	75.4	+ 8.2	108	3	33	30	49	55	0.64	-4.00	0.64	0	1	22	7	1	sw.	Fr. Adelhelm Hess
Edgerton.....	Platte.....	856	19	75.2	+ 7.3	107	3	30	30	49	28	0.78	-3.81	0.78	0	1	28	0	2	s.	Fred L. Stiff
Elsberry.....	Lincoln.....	449	8	73.0	.....	100	14†	40	22	46	8	0.40	.....	0.40	0	2	22	8	0	s.	Ray E. Mills
Fayette.....	Howard.....	760	59	73.8	+ 5.7	101	3	36	30	41	56	0.29	-4.67	0.24	0	2	24	5	1	sw.	Irvin E. Schnell
Fulton.....	Callaway.....	818	51	73.8	+ 4.9	105	3	38	22†	51	47	0.37	-4.12	0.24	0	3	23	6	1	sw.	Clyde C. Herring
Grant City.....	Worth.....	1,134	35	72.6	+ 5.6	103	3†	30	30	44	47	0.67	-4.02	0.67	0	1	17	11	2	sw.	Howard Rybolt
Hannibal.....	Marion.....	759	47	71.6	+ 3.9	97	7†	35	30	36	55	0.23	-3.74	0.23	0	2	20	6	4	sw.	Hannibal Water Dept.
Kansas City Airport	Jackson.....	741	50	76.7	+ 7.8	107	3	38	30	38	50	0.54	-4.02	0.49	0	3	20	5	5	sw.	U. S. Weather Bureau
Kansas City Univ.	Jackson.....	908	1	77.0	.....	107	3	34	30	51	1	0.58	.....	0.50	0	2	21	8	1	sw.	University of Kansas City
Kidder.....	Caldwell.....	1,020	47	74.0	+ 6.7	105	3	32	30	39	51	0.57	-4.63	0.48	0	2	29	1	0	se.	Mrs. Geraldine Terry
King City.....	Gentry.....	1,095	.....	.....	.....	.....	.....	.....	.....	.....	13	0.36	-5.06	0.36	0	1	19	10	1	sw.	John M. Martin
Kirkville.....	Adair.....	969	50	72.4	+ 6.1	100	3†	35	30	40	57	0.23	-3.95	0.23	0	1	9	21	0	sw.	Howard Coons
Lawson.....	Ray.....	1,070	1	74.5	.....	105	3	32	30	38	1	0.41	.....	0.41	0	1	20	10	0	sw.	Elmer E. Lamb
Linneus.....	Lincoln.....	816	.....	.....	.....	.....	.....	.....	.....	.....	7	0.41	.....	0.39	0	3	26	2	2	sw.	H. D. Taggart
Louisiana.....	Pike.....	469	45	72.2	+ 4.2	100	6†	36	22	47	58	0.17	-4.26	0.17	0	1	24	5	1	s.	Stark Bro's Nurseries
Macon.....	Macon.....	875	40	71.4	+ 3.5	100	3	33	30	43	46	0.27	-4.17	0.27	0	2	24	5	1	n.	Mrs. W. C. Brown
Maryville.....	Nodaway.....	1,169	49	74.0	+ 8.4	107	3	33	30	46	45	0.92	-3.76	0.92	0	1	24	3	3	sw.	R. B. Montgomery
Memphis.....	Scotland.....	787	0	71.5	.....	100	7†	35	30	47	9	0.30	-3.88	0.30	0	2	23	3	4	sw.	John W. Alexander
Mexico.....	Audrain.....	800	50	73.4	+ 4.9	104	3	35	30	48	61	0.37	-4.60	0.29	0	2	.....	.....	.....	sw.	Mrs. Abbie Snoddy
Moberly.....	Randolph.....	875	2	73.7*	.....	100	3†	34	30	43	2	0.25	.....	0.25	0	1	23	7	0	s.	McCormick Hospital
Oregon.....	Holt.....	1,048	83	75.8	+ 8.7	106	3	33	30	44	83	0.50	-4.60	0.50	0	1	25	5	0	sw.	Miss Mina Wright
St. Charles.....	St. Charles.....	520	51	76.5	+ 8.2	104	15	47	22	44	61	1.03	-2.81	0.98	0	2	27	1	2	s.	Martin L. Comann
St. Joseph.....	Buchanan.....	957	29	75.5	+ 7.1	106	3	36	30	36	67	0.42	-3.50	0.42	0	1	20	7	3	s.	U. S. Weather Bureau
Steffenville.....	Lewis.....	650	41	72.4	+ 3.4	99	15	34	30	42	46	0.12	-4.38	0.12	0	1	17	10	3	s.	Frank Hall
Tarkio.....	Atchison.....	916	36	72.3	+ 6.0	105	6†	32	30	40	45	0.69	-3.55	0.69	0	1	24	3	3	ne.	Albert Volker
Trenton.....	Grundy.....	822	43	73.6	+ 6.4	106	7	35	30	45	44	0.35	-4.40	0.35	0	1	28	2	0	s.	W. H. Estes
Unionville.....	Putnam.....	1,062	46	73.6	+ 6.5	106	3†	32	30	53	46	0.30	-4.79	0.30	0	1	27	1	2	nw.	John H. Schick
Warrenton.....	Warren.....	816	57	74.2	+ 5.2	98	6†	41	30	42	49	0.51	-3.85	0.38	0	4	17	12	1	sw.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.....	574	67	73.1	+ 5.6	100	15	37	30	36	67	0.23	-3.61	0.23	0	1	20	5	5	sw.	U. S. Weather Bureau
<b>Division means and extremes</b>	<b>and extremes</b>	<b>.....</b>	<b>.....</b>	<b>73.8</b>	<b>+ 6.0</b>	<b>108</b>	<b>3</b>	<b>30</b>	<b>30</b>	<b>53</b>	<b>..</b>	<b>0.42</b>	<b>-3.81</b>	<b>0.98</b>	<b>0</b>	<b>2</b>	<b>22</b>	<b>6</b>	<b>2</b>	<b>sw.</b>	
Southwestern Division																					
Appleton City.....	St. Clair.....	813	44	75.8	+ 5.4	104	7†	35	30	46	47	0.24	-4.14	0.19	0	2	28	1	1	sw.	Rolla Brown
Bolivar.....	Polk.....	1,071	36	78.2	+ 8.3	105	3	37	30	42	44	0.63	-3.58	0.60	0	4	20	9	1	sw.	Southwest Baptist College
Boonville.....	Cooper.....	650	1	74.8	.....	102	3	38	30	40	62	0.34	-4.85	0.24	0	2	24	4	2	se.	Boonville Water Dept.
Clinton.....	Henry.....	786	46	76.6	+ 5.8	106	3	35	30	48	52	0.17	-4.35	0.17	0	1	.....	.....	.....	.....	U. S. Weather Bureau
Dean, Ia.....	McDonald.....	1,000	35	77.2	+ 6.2	108	2	34	30	45	40	1.66	-2.22	1.28	0	3	26	3	1	sw.	E. S. Taylor
Eldon.....	Miller.....	934	44	76.0	+ 6.6	106	3	38	30	51	40	1.18	-3.44	0.44	0	4	18	9	3	n.	E. H. Shepherd
Garber.....	Taney.....	950	5	76.6	.....	108	3	39	30	52	5	1.44	.....	1.44	0	1	20	6	4	e.	William H. Durham
Harrisonville.....	Cass.....	904	61	75.6	+ 7.1	105	3	33	30	42	64	0.60	-4.30	0.54	0	2	19	9	2	sw.	John H. Patterson
Jefferson City.....	Cole.....	557	49	75.4	+ 6.1	107	3	35	30	48	57	0.66	-3.57	0.65	0	3	28	0	2	s.	Mrs. Frank Kliegel
Lakeside.....	Miller.....	595	8	75.2	.....	105	3	41	22†	47	8	0.32	.....	0.28	.....	4	.....	.....	.....	ne.	W. S. Frame
Lamar.....	Barton.....	980	51	78.2	+ 7.4	105	3	40	30	50	58	1.03	-3.52	0.63	0	2	25	3	2	sw.	Jesse A. Mann
Lebanon.....	Laclede.....	1,265	51	75.9	+ 6.5	101	3	36	30	42	52	1.81	-2.68	0.94	0	2	22	7	1	sw.	Mrs. Rosa E. Montelius
Lexington.....	Lafayette.....	688	54	75.2	+ 6.4	104	3	36	30	44	55	0.91	-3.86	0.57	0	3	26	4	0	s.	Miss Carrie Loomis
Lockwood.....	Dade.....	1,078	33	79.4	+ 8.5	105	3	35	30	44	43	0.55	-4.23	0.45	0	2	24	5	1	sw.	Hubert A. Nieman
Marshall.....	Saline.....	779	52	75.8	+ 7.0	103	3	36	30	46	49	0.35	-5.15	0.35	0	1	24	5	1	se.	Sec. Chamber of Commerce
Mountain Grove.....	Wright.....	1,468	38	77.0	+ 8.1	100	8†	40	30	41	42	0.76	-3.30	0.63	0	3	12	17	1	sw.	Mo. Fruit Exp. Station
Mount Vernon.....	Lawrence.....	1,174	27	78.0	+ 7.5	106	3	33	30	41	39	0.93	-2.91	0.90	0	2	11	18	1	sw.	G. H. Boswell
Neosho.....	Newton.....	1,011	52	77.6	+ 7.1	105	3	37	30	46	56	0.40	-3.89	0.38	0	2	22	7	1	sw.	U. S. Fisheries Station
Nevada.....	Vernon.....	862	46	77.6	+ 8.1	107	3	35	30	52	47	1.08	-3.23	1.04	0	2	29	0	1	s.	Henry Kraft
Sedalia.....	Pettis.....	910	26	76.8	+ 7.6	107	3	34	30	43	28	0.90	-4.00	0.70	0	2	26	3	1	sw.	Dr. J. E. Cannaday
Seligman.....	Barry.....	1,542	38	77.8*	+ 8.2	100	3	36	30	35	36	0.40	-3.28	0.40	0	1	26	3	1	sw.	Floyd E. Fawver
Seymour (near).....	Webster.....	1,642	33	75.8	+ 7.0	100	3	38	30	45	33	0.35	-3.67	0.30	0	2	24	5	1	s.	A. L. Halley
Springfield.....	Greene.....	1,301	51	77.6	+ 8.7	102	3	39	30	37	51	0.70	-2.82	0.70	0	1	22	7	1	se.	U. S. Weather Bureau
Versailles.....	Morgan.....	1,037	12	76.4	+ 5.7	105	3	34	30	50	15	0.66	-3.90	0.66	0	1	23	6	1	se.	J. M. Wilson
Warrensburg.....	Johnson.....	878	52	77.6	+ 7.4																



## Daily Precipitation for September 1939

Continued on next page



## Daily Precipitation for September 1939—Continued from preceding page

Stations	Drainage-basins	Day of month																														Total			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		..		
<i>Southeastern Division—Concluded</i>																																			
Bragg City <sup>1</sup>	St. Francis																														T.	1.35	1.35		
Campbell	do																														2.04	.19	2.23		
Cape Girardeau <sup>1</sup>	Mississippi																	.08	T.												.01	1.05	1.14		
Carnithersville <sup>1</sup>	do																														.75	1.09	1.75		
Centerville <sup>1</sup>	Black																	.22														.74	0.96		
Crystal City <sup>1</sup>	Mississippi																														.07	.85	0.92		
Cuba <sup>1</sup>	Meramec									.09																							1.12	1.21	
Dexter <sup>1</sup>	St. Francis			T.																												T.	1.28	1.28	
Doniphan	Black																	T.													3.55	.10	3.65		
Farlington	St. Francis																															.50	.20	0.70	
Fisk <sup>1</sup>	do																															.06	1.32	1.38	
Fredericktown <sup>1</sup>	do																																.76	0.76	
Goodland	Black																															.50	.20	0.70	
Greenville	St. Francis																																	1.11	
Jackson	Mississippi																	.16														.95	.17	1.12	
Jerome <sup>1</sup>	Gasconade																	.20															.18	0.88	
Koshkonoong	Black				T.													.28														1.31		1.59	
Leeper <sup>1</sup>	do																																1.10	1.10	
Licking (near)	Gasconade																1.47	.10														.97		2.54	
Marble Hill	Mississippi																	.10														.80	.25	1.15	
Meramec Park <sup>1</sup>	Meramec									.07																						.09	.90	1.06	
Morehouse	Mississippi																															.92	.31	1.23	
New Madrid <sup>1</sup>	do																															10	1.44	1.54	
Owensville <sup>1</sup>	Gasconade																																.75	0.75	
Pacific <sup>1</sup>	Meramec																																1.63	1.63	
Parma <sup>1</sup>	St. Francis																																1.60	1.60	
Poplar Bluff <sup>1</sup>	Black																			T.												.08	1.24	1.32	
Richwoods <sup>1</sup>	Meramec										.15								.30														.64	1.09	
Rolla	do									.01								T.	.02													.99	.07	1.09	
St. Louis <sup>1</sup>	Mississippi								.07	.05																	T.						.83	.06	1.01
St. Louis Airport <sup>1</sup>	Missouri								.09	.06								.17								T.							.79	T.	1.11
St. Louis University <sup>1</sup>	Mississippi								.10	.03																							.71	.07	0.91
Salem <sup>1</sup>	Meramec																		.08														1.56		1.64
Sikeston <sup>1</sup>	Mississippi					T.														.09													.02	1.23	1.34
Union	Meramec										.08																						1.13	.19	1.40
Valley Park <sup>1</sup>	do										.12								T.								T.						.90	1.02	
Van Buren	Black																.21																.94		1.15
Wappapello Dam <sup>1</sup>	St. Francis																		.05													.02	.97	1.04	
Washington Univ. <sup>1</sup>	Mississippi										.25																							.90	1.15
West Plains	Black																		.21														.93	T.	1.14
Williamsville <sup>1</sup>	do																																	.94	0.94
Willow Sprgs. (near) <sup>1</sup>	White																		.13													.05	.93	1.11	
Zalma (near) <sup>1</sup>	Mississippi																			.02													.94	0.96	
Cauro, Ill. <sup>1</sup>	do				T.	T.																											1.12	.08	1.20

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation.

<sup>1</sup> First-order Weather Bureau station: precipitation is for the 24-hour period, midnight to midnight, unless otherwise indicated. <sup>2</sup> Precipitation is measured in the morning; amount then recorded is for the preceding 24 hours. <sup>3</sup> Precipitation is for 24-hour period, midnight to midnight. <sup>†</sup> Precipitation measured with recording gage. \* Included in next measurement. T. Trace, or precipitation less than 0.01 inch. † Estimated. ‡ Partially estimated. |||| Incomplete.

NOTE:—In addition to the stations shown on daily temperature page, records of daily temperatures are kept at the following stations in Missouri: Advance, Appleton City, Bethany, Bolivar, Boonville, Campbell, Canton Lock No. 20, Clifton Hill, Columbia Airport, Conception, Dean, Edgerton, Elsberry, Fulton, Goodland, Greenville, Kansas City University, Kidder, Kirksville Airport, Koshkonong, Lakeside, Licking (near), Lockwood, Marble Hill, Memphis, Mount Vernon, St. Joseph Airport, St. Louis Airport, St. Louis University, Saverton Lock No. 22, Seligman, Seymour (near), Springfield Airport, Steffenville, Tarkio, Versailles, Wappapello Dam, Warsaw, and Washington University.

## Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for September 1939

(See precipitation data in daily precipitation table)

Station	Data	Day of month																															Monthly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	..	
Columbia.....	Evaporation .....	.213	.169	.180	.351	.222	.246	.265	.276	.216	.179	.220	.238	.253	.256	.234	.187	.180	.256	.194	.158	.222	.277	.064	.206	.130	.255	.095	.132	.213	.050	....	6.137
	Mean temperature ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
	Wind movement ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Lakeside ..... (Osage Dam)	Evaporation .....	.257	.250	.333	.522	.317	.318	....	.376	.373	.306	.274	.317	.344	.327	.313	.282	.205	.242	.271	.230	.245	.234	.172	.217	.199	.260	.190	.158	.240	.056	....	8.098
	Mean temperature ..	80	82	88	82	74	82	82	82	84	77	76	82	82	83	82	82	74	73	68	68	66	64	70	72	78	68	67	74	59	52	..	75.2
	Wind movement ..	49	29	54	70	26	29	55	51	48	44	16	49	44	28	9	22	23	32	29	19	24	30	27	33	34	44	24	30	53	72	..	1,097
St. Louis ..... (Washington University)	Evaporation .....	.171	.192	.199	.245	.296	.225	.233	.255	.251	.259	.247	.215	.214	.227	.217	.223	.228	.231	.191	.170	.202	.177	.159	.179	.176	.136	.278	.116	.192	.076	....	6.181
	Mean temperature ..	78	79	84	80	71	78	86	88	85	74	71	82	85	84	84	83	76	68	67	70	67	66	70	78	76	64	66	74	68	54	..	75.2
	Wind movement ..	14	14	41	65	41	12	37	27	22	32	29	36	23	16	14	11	30	41	23	17	41	26	10	16	23	45	38	12	25	77	..	859

Observations taken at 8:00 a. m. except at 7:30 a. m. at Lakeside. For Columbia, Lakeside, and St. Louis (Washington University) descriptions see July 1938, April 1932, and August 1938 reports respectively. \* Included in next measurement.



## Daily Temperatures for September 1939

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	..	Mean	
Northern Division																																	
Brunswick \$	Maximum...	92	93	104	91	88	102	103	96	95	85	95	99	100	101	101	92	83	87	90	85	82	87	95	82	79	68	79	95	56	64	89.0	
	Minimum...	68	67	71	65	59	60	69	70	68	63	61	65	72	71	71	70	66	59	54	53	52	45	44	56	59	46	46	47	54	37	59.6	
Chillicothe \$	Maximum...	90	94	105	91	90	102	103	94	94	82	97	100	100	101	101	92	84	84	89	83	82	88	95	87	72	64	82	95	54	66	88.7	
	Minimum...	67	68	74	61	57	67	74	67	69	58	58	71	69	72	70	70	67	55	49	54	46	42	50	54	53	44	44	50	45	34	58.6	
Columbia	Maximum...	91	94	103	90	88	101	102	97	92	82	92	98	99	99	100	92	80	83	85	84	78	85	93	81	84	69	79	93	75	60	88.3	
	Minimum...	69	72	75	66	63	69	76	71	71	64	63	71	74	75	74	73	64	57	52	53	50	44	59	68	58	51	51	62	45	38	62.6	
Fayette	Maximum...	89	91	101	94	86	98	99	95	92	82	93	96	98	98	98	88	83	85	92	79	82	87	84	85	74	68	82	96	85	67	88.3	
	Minimum...	67	69	73	62	57	65	70	70	71	62	60	68	67	70	68	69	62	55	49	53	48	43	51	60	57	47	61	49	36	59.5		
Grant City	Maximum...	87	90	103	89	90	102	103	88	93	82	95	96	98	98	98	88	83	85	92	79	82	87	84	85	74	68	82	96	85	67	88.3	
	Minimum...	65	67	63	55	58	68	72	61	64	56	59	72	73	70	70	66	62	55	50	55	40	43	53	49	52	39	39	58	41	30	56.8	
Hannibal	Maximum...	89	91	92	89	80	94	97	88	89	79	86	95	95	97	97	86	79	75	80	78	72	83	90	79	73	67	74	90	80	57	84.0	
	Minimum...	62	67	73	62	57	65	72	69	68	60	55	71	71	73	69	70	62	54	50	51	45	47	57	59	58	46	45	54	45	35	59.1	
Kansas City Airport	Maximum...	94	101	107	92	94	103	102	99	90	85	95	97	99	100	99	91	84	84	90	83	81	87	96	83	75	63	82	93	70	64	89	84.0
	Minimum...	69	73	78	67	68	80	81	70	68	61	70	79	80	78	76	68	67	61	55	57	51	49	62	57	55	45	47	67	43	38	64.0	
Kirksville	Maximum...	89	92	100	88	87	97	100	88	89	81	91	96	98	98	100	89	82	82	86	81	78	85	91	84	77	62	80	98	82	60	86.9	
	Minimum...	62	66	74	60	57	65	74	68	68	56	55	70	70	70	68	69	61	50	48	58	44	47	52	54	54	43	42	53	45	35	57.9	
Lawson	Maximum...	92	98	105	93	91	101	101	95	93	84	95	96	99	99	99	90	83	84	88	82	80	85	85	85	72	64	80	94	81	62	88.5	
	Minimum...	68	69	77	59	61	72	73	67	67	58	63	72	73	73	72	70	65	56	56	56	48	51	57	53	59	42	42	61	44	32	60.5	
Louisiana	Maximum...	90	93	98	83	83	100	100	93	90	83	86	100	100	100	100	98	86	80	80	83	76	83	96	87	80	70	76	90	80	63	88.0	
	Minimum...	56	66	75	66	47	61	72	69	66	60	47	68	70	68	63	68	62	48	40	44	43	36	50	50	50	52	46	60	52	40	56.5	
Macon \$	Maximum...	88	90	100	88	84	97	99	89	90	78	90	95	96	97	99	87	78	80	84	81	76	82	90	80	72	65	77	93	54	63	84.9	
	Minimum...	62	66	72	60	57	65	73	67	69	58	55	67	73	73	72	69	59	49	48	54	45	47	50	55	54	43	43	50	50	33	57.9	
Maryville	Maximum...	87	94	107	94	91	104	104	89	90	84	97	98	100	100	100	90	84	84	90	81	82	88	83	82	75	65	79	96	87	61	88.9	
	Minimum...	68	69	73	58	63	73	78	61	66	56	62	77	71	68	68	65	64	57	53	61	49	48	52	48	54	38	42	58	41	33	59.1	
Mexico \$	Maximum...	91	94	104	90	86	101	101	96	94	80	91	98	101	101	102	95	78	81	83	83	78	87	95	85	84	69	80	94	57	60	88.0	
	Minimum...	61	67	70	63	59	63	72	70	73	61	57	61	70	72	70	71	60	55	56	56	46	40	47	47	63	55	48	47	49	45	35	58.8
Moberly	Maximum...	89	89	100	92	90	97	99	97	97	91	92	96	97	99	100	93	78	85	88	83	79	87	91	80	80	69	82	93	83	65	88.4	
	Minimum...	61	66	71	60	52	65	71	65	59	56	68	69	69	70	66	59	51	45	53	52	50	62	62	62	52	52	53	62	47	34	59.0	
Oregon	Maximum...	95	101	106	92	95	105	105	93	92	87	95	98	100	100	100	90	85	88	92	81	82	90	85	86	74	65	82	97	84	64	90.2	
	Minimum...	68	72	76	59	65	82	77	60	66	57	66	76	78	75	78	67	65	56	58	60	47	53	62	49	53	39	43	63	40	33	91.4	
St. Charles \$	Maximum...	95	95	96	90	88	98	102	101	96	88	88	100	100	102	102	104	95	84	81	87	90	84	88	95	91	94	72	84	95	67	61	90.4
	Minimum...	64	69	76	71	56	64	71	76	71	68	57	67	73	71	69	72	68	58	50	53	55	47	51	62	61	55	52	57	66	48	62.6	
St. Joseph	Maximum...	93	99	106	92	93	102	102	93	91	84	94	96	99	99	99	90	85	84	90	81	87	87	84	70	64	80	95	56	64	88.0		
	Minimum...	71	72	75	64	67	79	80	65	70	61	68	79	79	78	76	70	66	61	59	59	49	52	61	53	50	42	44	62	42	36	63.0	
Trenton	Maximum...	88	92	104	90	87	105	106	91	94	83	95	98	100	100	100	94	82	85	89	85	81	87	94	88	74	64	80	95	55	64	89.3	
	Minimum...	66	68	70	67	55	65	70	66	67	58	58	69	70	69	69	64	56	50	51	46	43	51	52	54	43	43	50	45	35	58.0		
Unionville \$	Maximum...	90	93	106	96	93	105	105	90	96	85	96	101	102	102	106	95	89	86	93	90	85	88	94	86	73	70	84	96	58	65	90.6	
	Minimum...	64	67	69	58	56	62	70	64	65	54	55	61	71	70	70	67	63	53	53	57	45	50	53	50	51	41	42	43	46	32	56.7	
Warrenton	Maximum...	88	90	93	91	86	98	98	98	96	89	87	94	94	95	97	94	83	78	83	86	79	85	88	89	87	79	90	90	53	88.2		
	Minimum...	62	67	73	66	55	61	71	72	72	64	53	67	70	71	69	73	64	53	49	56	51	47	55	65	62	52	48	53	48	41	60.3	
Keokuk, Iowa	Maximum...	90	91	97	86	84	97	99	85	86	77	85	86	77	85	86	96	98	79	78	81	78	75	82	89	82	73	60	75	92	75	84.4	







NMS  
43<sup>10</sup>

# CLIMATOLOGICAL DATA

19

## MISSOURI SECTION

W. J. MOXOM  
ST. LOUIS, MO.

VOL. XLIII

OCTOBER 1939

No. 10

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### GENERAL SUMMARY

The hot weather of the warmest September of record continued into October, but with somewhat less intensity. While the monthly mean temperature for the State ranks only eighth in warmth, the highest October temperatures of record occurred at a number of stations on the 7th. There was a general cool period from the 10th to the 15th, with frosts ranging from light to killing. The 18th marked the beginning of a 10-day period of unseasonably high temperatures throughout the State. At St. Louis the temperature reached 88° on the 23d, which is the highest of record so late in the season. During the closing days of the month there was a decided change to colder, with minima much below freezing. Killing frosts were general, but owing to most vegetation having been forced to early maturity by the drought, the damage by frost was immaterial.

The average monthly precipitation for the State was 1.89 inches, or 0.97 inch less than normal. There were deficiencies in all divisions, the greatest occurring in the northern. There was a general rainy period from the 7th to the 10th, but amounts were generally light to moderate, and gave only temporary relief from the droughty conditions which had prevailed more or less intensely since the latter part of August. During the last week of October good rains were fairly general and the greater part of the month's precipitation occurred within this period. These latter rains were quite helpful in restoring the top soil moisture.

Corn gathering made good progress, was unusually advanced, and by the close of the month was practically completed in some sections. As weather conditions improved somewhat, better progress was made in plowing and sowing of winter wheat. About 85 per cent of the intended acreage had been sown, and fully two thirds had germinated. The growth of winter wheat was very poor and slow, due to lack of moisture, and there was much concern as to whether or not plant development would be sufficient to withstand the winter.—H. C. G.

### TEMPERATURE

The monthly mean for the State, 83 stations reporting, was 61.1°, or 3.6° above normal. The highest monthly mean was 64.4° at Lockwood, and the lowest monthly mean was 55.6° at Menphis. The highest recorded was 100° at Edgerton on the 7th, and the lowest was 19° at Edgerton on the 31st. The greatest daily range was 62° at Unionville on the 18th.

### PRECIPITATION

The average for the State, 144 stations reporting, was 1.89 inches, or 0.97 inch less than normal. The greatest local monthly amount was 6.98 inches at Williamsville, and the least local monthly amount was 0.13 inch at Oregon. The greatest amount in any twenty-four hours was 3.12 inches at Wappapello Dam on the 7th. The average number of days with 0.01 inch or more was 6.

A trace of snow occurred on the 30th at a number of stations, but melted as it fell.

### MISCELLANEOUS PHENOMENA

Auroras.—3d, 4th, 5th, 6th, 13th, 14th, 21st.

Eclipse.—Lunar, 27-28th.

Fog.—Dense, 1st, 2d, 6th, 15th.

Frost.—Light, 1st, 2d, 3d, 11th, 12th, 13th, 14th, 15th, 16th, 17th, 28th, 29th, 30th, 31st; heavy, 1st, 2d, 3d, 14th, 15th, 22d, 28th, 29th, 31st; killing, 1st, 2d, 14th, 15th, 16th, 28th, 29th, 30th, 31st.

Hail.—Light, 6th at Fulton, Linneus, Mountain Grove, Willow Springs; moderate, 6th at Arcadia, Wappapello Dam, 24th at Hannibal; heavy, 6th near Linneus over a small area.

(Continued on page 52)

### PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind				Relative humidity			Percentage of sunshine
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12:30 p. m.	6:30 p. m.	
Columbia.....	30.02*	30.60*	14	29.62*	27	8.1	29	sw.	8	73*	43*	50*	74
Kan. C. Airport.....	29.99	30.60	14	29.58	24	10.0	34	n.	29	65	41	41	84
St. Joseph.....	29.99*	30.61*	14	29.55*	24	9.1	26	s.	4	80*	44*	49*	79
St. Louis.....	30.04*	30.55*	14	29.70*	27	12.7	32	sw.	25	70	44	46	80
Springfield.....	30.06*	30.54*	14	29.72*	24	8.5	25	sw.	9	81*	44*	58*	84
Cairo, Ill.....	30.07	30.52	14	29.74	27	8.4	24	n.w.	27	80	47	54	81
Keokuk, Iowa..	30.00	30.59	14	29.62	27	8.2	25	w.	27	69	41	48	69

\* Data for Airport Station.

### COMPARATIVE DATA FOR OCTOBER

Year	Temperature			Precipitation					Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy
1888.....	53.6	89	24	2.72	2.02	3.32	2.82	.....	6	.....	.....	.....
1889.....	53.8	91	22	2.32	2.54	2.05	2.38	.....	5	.....	.....	.....
1890.....	54.8	91	20	2.35	3.01	2.70	1.33	.....	7	.....	.....	.....
1891.....	55.7	92	20	1.05	1.31	1.09	0.76	.....	5	.....	.....	.....
1892.....	57.5	95	16	2.40	2.04	2.78	2.39	0	5	16	7	8
1893.....	56.7	95	16	1.12	0.48	0.91	1.97	.....	3	20	8	3
1894.....	57.6	94	18	1.82	2.09	1.26	2.12	T.	6	17	8	6
1895.....	51.2	89	14	0.42	0.26	0.34	0.66	T.	2	21	6	4
1896.....	54.1	90	19	2.48	2.70	2.43	2.32	0	5	19	6	6
1897.....	62.5	99	23	0.74	0.55	0.81	0.87	0	3	22	6	3
1898.....	53.5	95	19	4.35	4.26	4.18	4.61	1.4	8	11	7	13
1899.....	62.4	100	24	3.16	1.98	3.58	3.93	0	5	20	6	5
1900.....	62.4	92	25	3.96	5.23	3.78	2.86	0	7	17	7	7
1901.....	60.1	96	24	1.69	1.55	1.63	1.89	0	6	18	8	5
1902.....	59.5	88	23	2.41	2.90	2.30	2.02	0	5	21	5	5
1903.....	57.3	90	19	3.06	2.19	3.76	3.22	0	6	19	6	6
1904.....	57.6	90	19	0.88	0.93	0.81	0.90	0	3	20	7	4
1905.....	55.1	90	20	4.85	3.67	5.78	5.09	0.3	10	15	7	9
1906.....	56.3	94	17	1.06	0.66	0.89	1.62	0	5	17	6	8
1907.....	56.7	94	18	2.93	2.02	3.62	3.14	0	7	17	6	8
1908.....	56.3	92	21	2.39	3.60	3.11	0.45	0.8	5	18	6	7
1909.....	57.2	96	20	2.72	3.45	2.99	1.71	T.	6	19	5	7
1910.....	59.4	94	15	2.97	0.97	1.76	6.18	0	5	22	4	5
1911.....	56.9	96	25	3.16	3.81	3.31	2.36	0.2	8	11	7	13
1912.....	59.1	97	21	3.78	3.87	4.29	3.17	0.7	6	20	5	6
1913.....	54.7	93	11	4.65	3.68	3.92	6.36	3.3	9	15	6	10
1914.....	59.2	88	19	4.59	4.32	4.28	5.17	0	7	14	6	11
1915.....	59.3	95	22	1.22	0.77	1.61	1.29	0	3	23	5	3
1916.....	58.0	95	20	2.12	2.53	2.03	1.79	0.3	6	18	5	8
1917.....	49.8	93	12	1.15	1.25	0.77	1.43	0.2	6	16	8	7
1918.....	60.6	95	28	3.45	3.02	3.51	3.82	0	7	14	6	11
1919.....	58.4	98	17	7.07	3.49	8.48	9.23	0	11	10	7	14
1920.....	61.3	93	18	3.14	1.94	3.76	3.73	T	7	17	6	8
1921.....	57.9	92	24	2.15	2.78	2.20	1.47	0	5	21	5	5
1922.....	59.9	97	18	2.04	2.00	1.84	2.28	0	5	20	5	6
1923.....	53.0	89	17	3.55	2.40	4.40	3.84	0.1	9	15	5	11
1924.....	61.8	92	21	1.22	1.54	1.59	0.52	0	4	22	5	4
1925.....	48.6	92	3	4.98	3.70	4.12	7.12	2.4	10	8	8	15
1926.....	57.3	93	21	4.78	4.43	4.98	4.77	0	9	14	6	11
1927.....	60.9	93	26	4.59	5.49	5.33	2.96	0	5	22	5	4
1928.....	60.9	94	22	3.82	3.85	2.91	4.71	0	8	15	8	8
1929.....	57.2	91	23	5.36	6.30	5.97	3.80	T.	10	15	6	10
1930.....	55.3	92	11	3.09	2.43	3.68	3.17	T.	6	16	6	9
1931.....	61.7	95	27	3.37	3.89	3.99	2.23	0	8	15	7	9
1932.....	55.7	90	22	3.54	2.79	3.19	4.65	0	5	18	5	8
1933.....	56.4	86	23	2.90	1.68	3.78	3.25	0	7	17	8	6
1934.....	61.1	90	24	2.50	2.22	3.02	2.25	0	4	22	5	4
1935.....	57.1	90	21	3.47	2.04	4.42	3.94	T.	10	12	7	12
1936.....	56.7	89	20	3.55	2.45	3.76	4.43	T.	8	16	6	9
1937.....	56.3	98	15	2.44	1.57	1.89	3.86	T.	7	16	6	9
1938.....	63.9	99	19	1.23	1.11	1.50	1.09	0	3	24	4	3
1939.....	61.1	100	19	1.89	1.39	1.92	2.35	0	6	21	7	3
Period.....	57.5	100	3	2.86	2.56	3.01	3.01	0.2	6	17	6	8

NAT.  
HIST.



## Climatological Data for October 1939

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.						Precipitation, in inches				Number of days				Prevailing direction of wind	Observers		
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Length of record, years	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelted	With precip., .01 inch or more	Clear			Partly cloudy	Cloudy
Northern Division																					
Bethany	Harrison	916	44	59.0	+ 4.2	94	7	24	14	50	46	1.45	-1.47	0.75	0	4	21	6	4	nw.	A. S. Cumming
Brunswick	Chariton	652	58	59.4	+ 4.1	98	7	25	31	50	60	1.17	-1.83	0.80	0	6	21	8	2	nw.	O. K. Bencke
Canton, Lock & Dam 20	Lewis	488	1	59.0	.....	97	7	27	31	43	9	1.88	-0.38	1.40	T.	7	18	7	6	s.	Lockmaster
Chillicothe	Livingston	779	30	59.8	+ 4.8	99	7	24	31	47	33	0.49	-2.65	0.34	0	3	22	4	5	se.	Wm. J. Olenhouse
Chilton Hill	Randolph	731	40	59.4	+ 2.7	94	7	22	31	41	30	1.06	-1.46	0.41	T.	7	18	11	2	sw.	Dr. A. J. Bradsher
Columbia	Boone	740	49	61.1	+ 4.2	96	7	25	31	40	49	1.33	-1.28	0.57	0	5	17	7	7	s.	U. S. Weather Bureau
Conception	Nodaway	980	50	60.6	+ 5.2	95	7	24	14	45	55	0.19	-2.69	0.11	0	3	19	9	3	w.	Fr. Adelhelm Hess
Edgerton	Platte	856	19	60.4 <sup>a</sup>	+ 4.1	100	7	19	31	48	28	0.70	-1.92	0.27	0	5	25	4	2	nw.	Fred L. Stiff
Elberry	Lincoln	439	8	59.0	.....	93	7	28	11	49	8	2.51	.....	1.21	T.	6	17	12	2	n.	Ray E. Mills
Fayette	Howard	760	59	60.3	+ 3.9	97	7	21	31	44	56	1.36	-1.53	0.93	0	6	22	5	4	s.	Irvin E. Schnell
Fulton	Callaway	818	51	60.2	+ 2.8	96	7	24	31	51	47	2.60	-0.82	1.35	T.	6	22	5	4	s.	Clyde C. Herring
Grant City	Worth	1,134	35	58.6	+ 3.5	95	7	20	14	47	47	0.29	-2.75	0.13	0	4	19	10	2	ne.	Howard Rybolt
Hannibal	Marion	759	47	58.3	+ 2.3	95	7	24	31	43	55	1.68	-0.71	0.88	T.	7	12	11	8	sw.	Hannibal Water Dept.
Kansas City Airport	Jackson	741	50	62.1	+ 4.4	98	7	28	31	43	50	0.95	-1.97	0.78	0	3	20	5	6	sw.	U. S. Weather Bureau
Kansas City Univ.	Jackson	908	1	62.4	.....	97	7	24	31	51	1	0.78	.....	0.48	0	4	20	8	3	sw.	University of Kansas City
Kidder	Caldwell	1,020	47	60.2	+ 4.4	98	7	24	14	44	51	3.10	+0.03	2.80	0	4	25	2	4	sw.	Mrs. Geraldine Terry
King City	Gentry	1,095	50	58.6	+ 3.9	95	7	24	31	43	57	1.81	-1.32	1.23	T.	4	18	10	3	sw.	John M. Martin
Kirksville	Adair	969	50	58.6	+ 3.9	95	7	24	31	43	57	1.81	-1.32	1.23	T.	4	18	10	3	sw.	Howard Coous
Lawson	Ray	1,070	1	60.9	.....	98	7	24	31	42	1	0.63	.....	0.34	0	3	23	5	3	sw.	Elmer E. Lamb
Linneus	Lin.	816	1	60.9	.....	98	7	24	31	42	1	0.63	.....	0.34	0	3	23	5	3	sw.	H. D. Taggart
Louisiana	Pike	469	45	58.6	+ 2.4	94	7	23	31	45	58	2.64	-0.64	1.76	0	8	22	6	3	w.	Stark Bros' Nurseries
Macon	Macon	875	40	58.1	+ 1.8	96	7	23	31	45	46	0.96	-1.93	0.42	T.	6	22	3	6	sw.	Mrs. W. C. Brown
Maryville	Nodaway	1,169	49	58.5	+ 5.0	91	7	24	31	40	45	0.31	-2.66	0.20	0	3	22	3	6	sw.	R. B. Montgomery
Memphis	Scotland	787	0	55.6	.....	95	7	24	14	53	9	1.75	-0.18	1.14	T.	5	19	4	8	sw.	John W. Alexander
Mexico	Audrain	800	50	59.6	+ 3.3	98	7	24	31	44	61	2.25	-0.82	0.75	T.	6	20	6	4	s.	Mrs. Abbie Snoddy
Moberly	Randolph	875	2	59.8	.....	94	7	26	14	41	2	1.67	.....	0.54	0	8	19	7	5	s.	McCormick Hospital
Oregon	Holt	1,048	83	61.0	+ 5.9	93	7	27	14	40	83	0.13	-2.62	0.12	T.	2	26	3	2	sw.	Miss Mina Wright
St. Charles	St. Charles	520	51	62.2	+ 4.0	95	7	29	31	47	61	1.24	-1.94	0.54	T.	5	16	11	4	sw.	Martin L. Comann
St. Joseph	Buchanan	957	29	60.8	+ 4.8	96	7	29	31	38	67	0.95	-1.94	0.49	0	4	23	4	7	n.	U. S. Weather Bureau
Steffenville	Lewis	650	41	59.4	+ 2.0	98	7	24	31	45	46	2.02	-0.71	1.00	T.	8	15	9	4	n.	Frank Hall
Tarkio	Atchison	916	36	56.7	+ 1.9	89	6	25	31	45	45	1.32	-1.49	0.99	0	4	23	6	2	sw.	Albert Volker
Trenton	Grundy	822	43	61.2	+ 5.3	98	7	25	14	43	44	1.57	-1.56	1.36	T.	6	24	5	2	sw.	W. H. Estes
Unionville	Putnam	1,062	46	58.8	+ 3.6	98	7	22	14	62	46	2.22	-0.91	1.90	T.	3	19	6	6	sw.	John H. Schick
Warrenton	Warren	816	57	60.0 <sup>a</sup>	+ 4.0	92	7	26	31	40	49	1.21	-2.23	0.73	T.	6	15	11	4	sw.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.	574	67	58.6	+ 3.2	94	7	27	14	38	67	2.35	+0.09	1.88	T.	8	15	8	8	sw.	U. S. Weather Bureau
Division means and extremes		.....	..	59.6	+ 3.8	100	7	19	31	62	..	1.89	-1.17	2.80	T.	5	20	7	4	sw.	
Southwestern Division																					
Appleton City	St. Clair	813	44	62.4	+ 3.5	98	7	21	31	50	47	1.75	-1.21	1.39	0	6	23	4	4	sw.	Rolla Brown
Bolivar	Polk	1,071	36	63.8	+ 5.2	94	7	24	31	39	44	1.19	-2.06	0.61	0	7	19	8	4	sw.	Southwest Baptist College
Boonville	Cooper	650	1	60.8	.....	95	7	26	31	42	62	0.80	-2.42	0.34	0	4	24	2	5	se.	Boonville Water Dept.
Clinton	Henry	786	46	62.0	+ 3.1	97	7	21	31	47	52	1.83	-1.62	1.00	0	8	.....	.....	.....	.....	U. S. Weather Bureau
Dean H.	McDonald	1,000	35	62.8 <sup>a</sup>	+ 4.1	95	8	21	31	48	40	4.29	+0.40	1.75	0	4	21	3	4	sw.	E. S. Taylor
Eldon	Miller	934	44	60.8	+ 3.4	96	7	25	31	46	40	3.55	-0.15	1.38	0	5	18	7	6	sw.	E. H. Shepherd
Garber	Taney	950	5	61.6	.....	96	7	22	31	53	5	4.38	.....	2.61	0	5	20	6	5	sw.	William H. Durham
Harrisonville	Cass	904	61	61.4	+ 5.3	97	7	28	28 <sup>b</sup>	45	64	0.51	-2.46	0.34	0	4	23	4	4	sw.	John H. Patterson
Jefferson City	Cole	557	49	60.2	+ 3.4	96	7	24	31	46	57	2.68	-0.69	1.46	T.	6	21	5	5	s.	Mrs. Frank Kligel
Lakeside	Miller	595	8	61.3	.....	94	7	26	31	48	8	1.84	.....	0.75	.....	4	.....	.....	.....	sw.	W. S. Frame
Lamar	Barton	980	51	63.2	+ 4.3	95	6	23	31	48	58	1.50	-2.11	0.70	0	5	24	4	3	sw.	Jesse A. Mann
Lebanon	Laclede	1,265	51	61.8	+ 4.1	92	7	21	31	41	52	1.89	-1.88	0.70	0	8	20	10	1	sw.	Mrs. Rosa E. Montellus
Lexington	Lafayette	688	54	60.9	+ 3.4	96	7	27	31	45	55	0.64	-2.39	0.47	0	5	24	5	2	sw.	Miss Carrie Loomis
Lockwood	Dade	1,078	33	61.4	+ 5.7	95	7	25	31	42	43	1.91	-1.99	0.97	0	6	21	9	1	sw.	Hubert A. Nieman
Marshall	Saline	779	52	60.8	+ 4.2	97	7	26	31	46	49	1.06	-2.07	0.71	0	4	24	5	2	sw.	Sec. Chamber of Commerce
Mountain Grove	Wright	1,463	38	62.2	+ 4.6	89	7	23	31	36	42	3.57	+0.11	1.52	0	8	14	16	1	se.	Mo. Fruit Exp. Station
Mount Vernon	Lawrence	1,174	27	63.3	+ 4.7	95	6	22	31	44	39	2.40	-0.98	0.70	0	6	11	19	1	sw.	G. H. Boswell
Neosho	Newton	1,011	52	63.6	+ 4.4	95	7	23	31	45	56	2.64	-1.05	1.24	0	4	21	5	5	sw.	U. S. Fisheries Station
Nevada	Vernon	862	46	63.5	+ 5.0	95	7	21	31	46	47	1.46	-1.61	1.17	0	5	25	3	3	sw.	Henry Kraft
Sedalia	Pettis	910	26	62.4	+ 4.7	93	7	24	31	38	28	0.91	-1.77	0.36	0	8	22	6	3	sw.	Dr. J. E. Cannaday
Seligman	Barry	1,542	38	63.2 <sup>b</sup>	+ 4.2	90	7	23	31	37	36	3.29	-0.17	1.51	0	5	22	5	3	sw.	Floyd E. Pawver
Seymour (near)	Webster	1,642	33	61.4	+ 4.0	91	7	20	31	44	33	1.75	-1.73	0.70	T.	4	23	6	2	se.	A. L. Halley
Springfield	Greene	1,301	51	62.2	+ 4.0	92	7	27	31	36	51	2.26	-0.79	1.22	T.	6	19	7	5	sw.	U. S. Weather Bureau
Versailles	Morgan	1,037	12	61.8	+ 4.2	95	7	22	31	43	15	1.91	-1.49	0.68	0	10	20	8	3	s.	I. M. Wilson
Warrensburg	Johnson	878	52	63.2	+ 5.2	96	7	24	31	39	59	0.84	-2.18	0.39	0	4	22	5	1	sw.	E. A. Markey
Warsaw	Benton	687	38	62.2	+ 3.2	97	7	22	31	51	44	2.25	-1.55	0.94	0	7	24	4	3	sw.	Everett Marti
Division means and extremes		.....	..	62.2	+ 4.3	98	7	20	31	53	..	1.92	-1.09	2.61	0	6	21	7	3	sw.	
Southeastern Division																					
Advance	Stoddard	354	2	60.5	.....	90	7	26	15	47	2	3.47	.....	2.02							



## Day of month

Continued on next page



## Daily Precipitation for October 1939—Continued from preceding page

Stations	Drainage-basins	Day of month																															Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Southeastern Division—Concluded																																		
Bragg City <sup>1</sup>	St. Francis	T.				T.	.32	.47			.58	T.																T.	.51	.79				2.67
Campbell	do						.71			.27																.12	.46	.25			.01			1.82
Cape Girardeau <sup>2</sup>	Mississippi						.32	.31		.03	T.															.06	.39	1.58	.06		.02			2.77
Caruthersville <sup>1</sup>	do						.56			.06																	.22	.27						1.17
Centerville <sup>1</sup>	Black						1.40			.28																.38	.38	.25		.08				2.77
Crystal City <sup>2</sup>	Mississippi						.24			.13																.02	.09	.23		.08	.01			0.80
Cuba <sup>1</sup>	Meramec						.11			.48																.11	.45	.25						1.43
Dexter <sup>1</sup>	St. Francis						.75			.37																	.21	.12	1.05	T.				2.53
Doniphan	Black						2.30			.87																T.	.50	.72			.02			4.41
Farmington	St. Francis					T.	.04	.27		.10																.20	.10	.60			.06			1.57
Fisk <sup>2</sup>	do	T.				T.	.03	1.30		.46																T.	.11	.24	1.13					3.27
Fredericktown <sup>2</sup>	do					T.				.03																.73	.20	.60	.46					2.02
Goodland	Black					.10	.21	.30		.29																.34	.35	.87						2.46
Greenville	St. Francis																																	
Jackson	Mississippi						.29																			.62	.21	.73		.07				1.92
Jerome <sup>2</sup>	Gasconade						.20			.50																.05	.05	.42			.36			1.53
Koshkonong	Black						.05			.15																.41	1.09	.91			.04			2.65
Leeper <sup>2</sup>	do					T.	2.70			.17																.10	.28	.78		.50				4.53
Licking (near)	Gasconade					.04	.07			.70																.04	.80	.42			.10	.02		2.19
Marble Hill	Mississippi					.15																				.50	.15	.35						1.15
Meramec Park <sup>2</sup>	Meramec									.04	.36	.08																.53						1.01
Morehouse	Mississippi					.17	.43			.24																.29	.34	1.09						2.56
New Madrid <sup>1</sup>	do	.11					.23	T.		.43	.24																.01	.44	.86		.01			2.33
Owensville <sup>2</sup>	Gasconade									.15																				T.				0.15
Pacific <sup>1</sup>	Meramec						.75			.30																		.45						1.50
Parma <sup>2</sup>	St. Francis	.10					.27			.15																	.25	.60	.80					2.17
Poplar Bluff <sup>2</sup>	Black					T.	.91			.35																	.04	.68	.90		.03			2.94
Richwoods <sup>2</sup>	Meramec						1.65			1.00																.29	.12			.29				3.35
Rolla	do						.02			.76																.02	.08	.64	.29		T.	.07		1.90
St. Louis <sup>1†</sup>	Mississippi					T.	.01		T.	.19	.07															.02	.30	.05	.07		.05	.01		0.77
St. Louis Airport <sup>3†</sup>	Missouri					.15	T.	.41	.10	.17																.39	.04	.01	.32		.03	.03		1.65
St. Louis University <sup>3†</sup>	Mississippi					.01		.05	.06	.11																.02	.21	.03	.06		.05	.63		0.63
Salem	Meramec						.80			.46																	.26	.24	.45		.13			2.34
Sikeston <sup>2</sup>	Mississippi	T.					.13	.39		.13	.03																.21	.80	.72		.02			2.43
Union	Meramec						.39	.04		.19																.04		.20	.13		.17			1.16
Valley Park <sup>1</sup>	do					T.	.17			.30	T.															.03	T.	.10	T.		.04	T.		0.64
Van Buren	Black									.06																.52	.58	.21						1.37
Wappapello Dam <sup>1</sup>	St. Francis					T.		3.12		.10	T.															.20	.11	1.01	.20		.04			4.78
Washington Univ. <sup>1†</sup>	Mississippi						.07			.05	.28															.13		.06	.11		.02	.02		0.74
West Plains	Black					T.	.10	T.		.29																.85	.25	1.77		.05				3.31
Williamsville <sup>2</sup>	do					.01		3.01		.40	.02															.45	.19	2.58	.32					6.98
Willow Sprgs. (near) <sup>2</sup>	White						1.56			.70																.26		1.53	.11		.10			4.26
Zalma (near) <sup>1</sup>	Mississippi						1.25			.06																.04		.33	2.25	.22	.05			4.20
Cairo, Ill. <sup>1†</sup>	do					.01	T.	.05		.18																.26	.63	.32			.02			1.47

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation.

<sup>1</sup> First-order Weather Bureau station; precipitation is for the 24-hour period, midnight to midnight, unless otherwise indicated. <sup>2</sup> Precipitation is measured in the morning; amount then recorded is for the preceding 24 hours. <sup>3</sup> Precipitation is for 24-hour period, midnight to midnight. <sup>†</sup> Precipitation measured with recording gage. \* Included in next measurement. T. Trace, or precipitation less than 0.01 inch. † Estimated. ‡ Partially estimated. |||| Incomplete.

NOTE:—In addition to the stations shown on daily temperature page, records of daily temperatures are kept at the following stations in Missouri: Advance, Appleton City, Bethany, Bolivar, Boonville, Campbell, Canton Lock No. 20, Clifton Hill, Columbia Airport, Conception, Dean, Edgerton, Elsberry, Fulton, Goodland, Greenville, Kansas City University, Kidder, Kirksville Airport, Koshkonong, Lakeside, Licking (near), Lockwood, Marble Hill, Memphis, Mount Vernon, St. Joseph Airport, St. Louis Airport, St. Louis University, Saverton Lock No. 22, Seligman, Seymour (near), Springfield Airport, Steffenville, Tarkio, Versailles, Wappapello Dam, Warsaw, and Washington University.

## Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for October 1939

(See precipitation data in daily precipitation table)

Station	Data	Day of month																															Monthly	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Columbia.....	{ Evaporation .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.....
	{ Mean temperature .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.....	
	{ Wind movement ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.....	
Lakeside ..... (Osage Dam)	{ Evaporation .....	.136	.124	.182	.204	.244	.202	.144	.277	.246	.171	.114	.127	.122	.180	.116	.152	.164	.096	.172	.173	.191	.171	.143	.181	.081	.193	.087	.189	.115	.088	.082	4.867	
	{ Mean temperature .....	54	56	62	68	76	68	73	77	78	61	58	56	55	46	52	60	56	62	64	64	64	64	67	63	74	70	67	50	51	42	43	61.8	
	{ Wind movement ..	31	31	39	41	70	34	50	57	67	74	53	18	20	73	37	45	40	28	42	41	41	31	27	37	51	59	66	135	48	97	81	1,564	
St. Louis ..... (Washington University)	{ Evaporation .....	.108	.067	.112	.142	.171	.114	.133	.177	.120	.127	.087	.126	.124	.158	.087	.118	.132	.103	.101	.102	.183	.165	.135	.122	.042	.088	.090	.105	.094	.085	.037	3.500	
	{ Mean temperature .....	50	54	60	68	73	72	76	79	76	60	56	53	56	44	49	58	52	60	66	66	66	64	67	64	72	72	74	43	52	41	42	60.8	
	{ Wind movement ..	38	7	14	24	57	17	23	32	18	52	25	21	28	76	18	26	42	21	16	16	20	32	20	13	31	51	67	64	33	51	34	987	

Observations taken at 8:00 a. m. except at 7:30 a. m. at Lakeside. For Columbia, Lakeside, and St. Louis (Washington University) descriptions see July 1938, April 1932, and August 1938 reports respectively. \* Included in next measurement.

Continued from page 49

Halos.—Solar, 4th, 5th, 6th, 20th, 24th; lunar, 4th, 5th, 23d, 24th, 25th, 29th.

Rainbow.—Lunar, 27th.

Sleet.—29th, 30th.

Thunderstorms.—Local, 4th, 5th, 10th, 20th, 26th, 29th, 30th; more or less general, 6th, 7th, 8th, 9th, 24th, 25th, 27th.



## Daily Temperatures for October 1939

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Northern Division																																	
Brunswick §§	Maximum	74	74	84	87	81	94	98	90	80	63	72	66	60	56	71	71	65	85	75	85	80	77	91	74	88	84	57	52	59	46	60	74.2
	Minimum	37	37	42	51	56	50	50	68	68	52	42	40	41	29	29	38	36	35	45	48	44	43	50	49	65	64	62	33	35	25	44.7	
Chillicothe §§	Maximum	75	74	86	88	79	93	99	81	74	65	73	68	59	57	74	66	72	85	79	84	80	79	92	76	88	79	63	57	55	45	61	74.4
	Minimum	38	42	49	56	55	54	63	63	65	49	42	37	42	25	31	43	30	38	48	47	44	50	47	55	64	54	44	31	33	26	44	45.1
Columbia	Maximum	70	73	83	85	84	91	96	83	82	69	72	64	62	55	68	74	64	83	80	84	82	76	91	72	88	79	79	52	61	44	58	74.5
	Minimum	37	43	49	61	54	51	68	69	68	41	39	40	38	30	38	47	38	44	54	51	46	48	53	63	68	69	41	34	39	31	25	47.7
Fayette	Maximum	70	73	82	82	83	90	97	86	80	70	71	65	61	50	69	72	64	83	75	84	82	77	91	77	88	84	74	62	62	44	58	74.4
	Minimum	34	41	45	45	46	46	67	68	66	51	38	38	43	27	33	43	35	43	54	49	43	49	47	61	62	63	47	32	38	35	21	46.2
Grant City	Maximum	74	74	83	88	81	91	95	75	77	69	68	66	75	56	76	66	63	85	87	80	76	89	86	83	76	71	54	54	46	60	74.3	
	Minimum	39	45	54	62	48	45	63	58	62	44	40	32	35	20	37	41	30	41	40	48	40	45	46	53	55	42	38	24	43	32	22	42.8
Hannibal	Maximum	68	66	81	84	80	89	95	87	79	72	69	63	56	47	67	67	56	80	71	80	79	69	89	76	82	84	73	45	53	43	54	71.0
	Minimum	35	40	44	57	62	53	66	67	64	52	40	37	45	25	33	43	32	38	56	47	45	50	43	42	63	67	43	31	37	32	24	45.6
Kansas City Airport	Maximum	73	76	85	88	83	94	98	83	77	63	72	68	60	56	75	66	64	82	76	81	80	91	87	88	84	76	58	56	45	61	75.1	
	Minimum	47	51	59	65	56	51	72	63	55	47	46	40	41	33	45	45	36	50	53	50	47	47	48	71	61	66	41	35	42	30	28	49.1
Kirksville	Maximum	73	73	82	87	79	90	95	86	73	71	70	64	55	54	69	64	60	82	73	80	78	74	87	77	86	82	72	51	55	45	58	72.4
	Minimum	35	46	45	56	55	50	55	62	63	49	40	36	41	25	32	45	29	40	56	45	43	50	44	47	64	58	41	30	37	33	24	44.7
Lawson	Maximum	72	74	85	86	80	90	98	88	73	70	71	67	57	54	73	64	62	83	79	83	79	77	91	75	88	82	73	56	54	45	60	73.9
	Minimum	41	41	54	61	52	57	71	64	64	47	43	34	46	27	39	46	31	46	53	52	47	52	49	64	68	60	44	31	48	32	24	47.9
Louisiana	Maximum	63	70	80	80	85	85	94	90	80	65	65	70	60	60	66	70	65	80	76	83	84	85	85	70	87	87	75	50	55	45	55	73.4
	Minimum	26	30	40	52	66	40	63	74	63	54	36	40	36	28	29	44	36	40	48	40	42	45	50	47	67	87	75	50	55	45	55	73.4
Macon §§	Maximum	71	72	82	85	80	89	96	89	80	62	71	62	59	52	68	67	60	82	78	84	78	75	89	76	82	65	45	44	30	23	43.8	
	Minimum	40	36	42	47	61	56	64	66	65	49	42	35	37	24	26	42	30	40	42	46	45	48	44	47	56	63	47	30	34	32	23	43.8
Maryville	Maximum	74	73	81	85	81	87	94	77	75	66	67	63	56	52	75	66	58	84	75	79	77	74	86	88	79	73	66	55	53	47	60	72.5
	Minimum	37	47	51	62	47	50	58	57	62	41	40	35	43	26	38	44	30	41	55	48	41	49	47	54	65	46	38	25	44	30	24	44.5
Mexico §§	Maximum	72	72	83	87	86	92	98	95	86	62	73	64	63	54	69	74	62	83	81	84	83	80	90	72	89	80	62	52	63	41	58	74.5
	Minimum	33	35	44	53	53	50	58	70	66	54	39	38	40	27	30	38	34	40	41	46	46	48	46	47	61	67	60	31	33	33	24	41.7
Moberly	Maximum	73	76	83	87	82	92	94	89	79	70	73	63	59	55	65	75	60	82	74	81	79	75	89	79	86	79	73	60	53	45	58	73.3
	Minimum	35	39	49	57	63	50	65	69	66	50	40	37	46	26	35	45	30	42	47	43	47	48	45	60	63	65	46	31	40	33	26	46.4
Oregon	Maximum	76	76	85	88	80	90	93	85	78	67	70	69	58	57	78	67	58	85	78	80	81	88	80	85	77	73	66	55	55	50	62	71.9
	Minimum	44	48	56	64	49	56	66	66	63	40	42	36	45	27	41	45	30	45	49	56	48	48	52	66	67	50	40	27	44	30	27	47.0
St. Charles §§	Maximum	70	72	84	85	88	94	95	89	89	63	77	70	68	58	70	80	64	84	85	85	85	93	72	86	80	72	55	68	46	59	76.4	
	Minimum	35	39	42	54	58	55	59	69	68	58	41	41	44	32	34	39	41	43	50	48	49	51	46	56	62	68	71	35	36	35	29	48.0
St. Joseph	Maximum	73	74	84	87	80	89	96	71	75	65	70	67	57	55	75	62	62	82	77	80	78	71	85	82	82	74	59	54	41	60	73.5	
	Minimum	46	48	58	65	54	58	68	50	51	44	45	40	38	30	42	41	33	49	55	52	48	51	53	70	70	53	36	32	42	30	29	48.1
Trenton	Maximum	74	72	85	87	84	91	98	90	76	71	73	69	65	60	71	70	62	84	79	83	84	86	91	82	88	77	70	68	60	58	62	76.5
	Minimum	38	41	58	58	54	50	65	62	64	49	42	35	46	25	34	42	31	41	50	45	43	44	56	58	64	50	44	30	44	36	25	45.9
Unionville §§	Maximum	70	76	84	94	83	94	98	85	76	74	73	68	62	60	75	67	64	82	81	86	82	79	95	85	80	85	55	52	58	43	62	76.0
	Minimum	34	43	47	51	54	52	54	61	62	47	43	34	36	22	23	39	29	30	43	47	44	47	45	46	48	51	42	30	29	32	24	41.6
Warrenton	Maximum	59	70	70	82	84	87	92	85	..	83	73	62	52	62	70	77	77	81	81	79	85	85	83	83	72	60	41	52	41	52	41	73.6
	Minimum	36	38	29	52	65	54	64	69	63	..	37	38	44	28	30	41	37	39	57	51	48	50	45	61	62	67	50	33	35	32	26	46.5
Keokuk, Iowa	Maximum	69	70	79	84	80	89	94	86	79	67	69	62	55	51	65	62	57	79	69	80	76	70	79	70	83	84	73	47	54	41	56	70.3
	Minimum	41	42	45	62	60	57	65	66	66	48	47	40	36	27	36	42	35	41	53													







NMS  
43"

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

# CLIMATOLOGICAL DATA

19 **MISSOURI SECTION**  
W. J. MOXOM  
ST. LOUIS, MO.  
VOL. XLIII NOVEMBER 1939 No. 11  
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## GENERAL SUMMARY

November weather throughout the State averaged slightly below normal. The monthly mean temperature was 0.9° below normal, and there was a deficiency in precipitation of 0.09 inch. There was a general cold period at the beginning of the month. On the 4th the temperature dropped to 14° in the northern division, and to 12° in the southwestern. There was a marked change to higher temperatures from the 6th to the 11th, inclusive. The highest temperature for the month was 78°, occurring at Jefferson City on the 9th. Temperatures were rather variable during the latter half of the month. Lowest temperature in the southeastern division occurred on the 28th.

Precipitation for the State was rather unevenly distributed. The northern division averaged 108 per cent of the normal, southwestern 113 per cent, and the southeastern 76 per cent. Good rains were fairly general on the 10th, and from the 18th to the 20th, inclusive. The latter rains restored much of the topsoil moisture which was mostly inadequate since the latter part of August.

Winter wheat made good progress during the last decade and by the close of the month was showing nicely in drill rows, and plants had generally advanced sufficiently to withstand an average winter. Corn gathering was completed in most areas unusually early. Pasturage was very poor and most livestock on dry feed, but supply of feed and forage generally plentiful.

River stages continued low. Many springs and small streams were dry. The shortage of stock water in many areas was serious. At St. Louis, on the 9th, the river stage was 3.7 feet below zero, which is the lowest November stage of record (1861-1939). Previous lowest, 2.9 feet below zero in 1937.—H. C. G.

## TEMPERATURE

The monthly mean for the State, 83 stations reporting, was 43.5°, or 0.9° below normal. The highest monthly mean was 46.7° at Campbell, and the lowest monthly mean was 39.5° at Memphis. The highest recorded was 78° at Jefferson City on the 9th, and the lowest was 12° at Seymour(near) on the 4th and at Doniphan and Licking(near) on the 28th. The greatest daily range was 54° at Union on the 15th.

## PRECIPITATION

The average for the State, 143 stations reporting, was 2.58 inches, or 0.09 inch less than normal. The greatest local monthly amount was 4.87 inches at Warrenton, and the least local monthly amount was 0.85 inch at Tarkio. The greatest amount in any twenty-four hours was 2.20 inches at Columbia on the 18-19th. The average number of days with 0.01 inch or more was 7.

Snowfall occurred on one day at a few stations and amounts were only a trace, except 1.5 inches at Seligman.

## MISCELLANEOUS PHENOMENA

Dust.—Local, 9th.

Earthquake.—23d.

Fog.—Dense, 6th, 10th, 11th, 16th, 17th, 18th, 19th, 20th, 21st, 22d, 23d, 24th, 25th, 27th, 28th, 29th, 30th.

Halos.—Solar, 1st, 2d, 4th, 6th, 9th, 11th, 28th; lunar, 28th.

Sleet.—24th.

Thunderstorms.—Local, 9th, 10th, 19th.

## PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)				Wind				Relative humidity			
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12:30 p. m.	6:30 p. m.
Columbia.....	30.30*	30.75*	27	29.78*	10	6.6	22	sw.	9	81*	58*	63*
Kan. C. Airport.	30.30	30.77	3	29.78	9	8.3	37	sw.	9	81	57	61
St. Joseph.....	30.29*	30.78*	3	29.73*	9	6.9	26	sw.	9	87*	59*	71*
St. Louis.....	30.29*	30.72*	27	29.81*	10	9.6	38	sw.	9	70	55	54
Springfield.....	30.30*	30.73*	27	29.85*	10	7.0	24	sw.	9	82*	73*	70*
Cairo, Ill.....	30.29	30.69	27	29.86	19	7.4	21	n.	10	79	53	56
Keokuk, Iowa...	30.29	30.76	3	29.80	10	6.8	24	nw.	7	77	54	60

\* Data for Airport Station.

## COMPARATIVE DATA FOR NOVEMBER

Year	Temperature			Precipitation						Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. 0.1 in. or more	Clear	Partly cloudy	Cloudy	
1888.....	41.6	87	15	3.39	2.57	2.95	4.64	....	7	7	..	..	
1889.....	39.9	76	6	3.52	3.16	3.12	4.29	0.6	7	..	..	..	
1890.....	46.5	80	14	2.38	1.96	2.48	2.70	T.	5	..	..	..	
1891.....	39.6	82	-7	4.14	2.67	3.24	6.51	....	8	..	..	..	
1892.....	40.1	79	9	2.75	2.17	2.14	3.95	1.0	6	11	7	12	
1893.....	40.9	79	-1	1.70	1.32	1.60	2.17	0.3	4	14	9	7	
1894.....	41.0	80	3	1.56	1.59	1.71	1.39	T.	4	15	9	6	
1895.....	41.6	82	-4	3.60	2.62	3.42	4.76	3.2	8	10	7	13	
1896.....	42.3	82	-5	2.43	1.47	2.30	3.53	0.2	6	11	7	12	
1897.....	43.4	82	-3	2.63	1.92	2.02	3.96	T.	6	13	8	9	
1898.....	39.9	79	-8	2.32	2.03	2.43	2.50	2.3	6	14	8	8	
1899.....	49.5	82	16	2.02	1.38	2.00	2.67	0.2	7	11	9	10	
1900.....	43.7	84	7	2.99	1.52	2.71	4.75	0.2	6	15	7	8	
1901.....	43.6	84	9	1.48	0.99	1.63	1.82	0.3	4	17	7	6	
1902.....	50.1	85	18	3.73	3.05	3.64	4.51	0.4	9	8	9	13	
1903.....	40.9	79	2	1.27	1.24	1.09	1.48	1.1	5	13	8	9	
1904.....	46.3	83	11	0.22	0.18	0.24	0.24	T.	2	21	5	4	
1905.....	45.8	83	2	1.87	2.36	1.35	1.89	T.	6	18	6	6	
1906.....	42.5	88	-3	3.56	2.55	2.68	5.44	5.0	8	12	6	12	
1907.....	43.8	88	11	2.24	1.39	1.91	3.43	T.	4	19	4	7	
1908.....	47.6	87	9	3.90	2.70	4.67	4.33	0.2	8	15	7	8	
1909.....	53.6	87	11	4.32	3.92	4.98	4.05	0.4	8	12	7	11	
1910.....	42.0	83	11	0.35	0.31	0.22	0.52	0.1	3	15	8	7	
1911.....	39.1	83	-3	2.63	2.07	2.78	3.04	1.1	7	13	6	11	
1912.....	45.9	85	12	1.50	1.46	1.31	1.73	0.1	3	20	5	7	
1913.....	51.7	80	11	2.71	2.61	2.69	2.83	T.	7	10	8	12	
1914.....	48.6	89	2	0.69	0.36	0.64	1.08	0.1	3	19	6	5	
1915.....	49.5	87	12	2.83	2.30	2.78	3.42	0.1	5	16	7	7	
1916.....	46.9	85	3	2.46	2.25	2.63	2.51	0.1	4	19	4	7	
1917.....	46.1	80	8	1.23	0.10	1.61	1.98	T.	3	14	5	11	
1918.....	44.9	85	12	3.26	2.85	4.14	2.78	1.2	6	15	4	11	
1919.....	42.2	78	2	3.57	3.06	3.19	4.45	1.0	6	15	5	10	
1920.....	40.9	82	6	1.06	1.64	0.82	0.73	T.	6	12	6	12	
1921.....	45.6	84	10	3.11	0.89	1.59	6.85	0.4	5	13	7	10	
1922.....	47.8	84	15	3.68	3.70	3.97	3.88	T.	7	16	6	8	
1923.....	45.1	79	14	2.25	1.39	2.79	2.57	3.0	6	15	6	9	
1924.....	46.7	88	4	1.78	1.16	2.08	2.09	0.5	4	15	8	7	
1925.....	42.8	80	-2	3.05	1.74	2.78	4.63	2.0	6	16	6	8	
1926.....	39.6	78	0	3.01	2.13	2.86	4.04	4.3	7	11	7	12	
1927.....	46.8	89	12	3.66	2.07	3.78	5.13	0.9	7	6	9	15	
1928.....	44.6	79	9	5.02	5.91	4.88	4.26	0.5	10	13	4	13	
1929.....	39.0	78	-8	1.46	1.40	1.00	1.98	2.1	6	11	8	11	
1930.....	45.8	83	8	2.93	2.94	3.28	2.56	T.	5	18	5	7	
1931.....	52.2	87	17	5.42	5.58	5.32	5.35	1.4	11	10	5	15	
1932.....	39.5	75	-9	1.87	1.55	2.11	1.95	4.5	5	16	5	9	
1933.....	45.9	83	7	0.93	0.47	0.96	1.37	0.2	4	16	6	8	
1934.....	48.5	84	16	5.71	5.62	5.84	5.67	4.6	10	14	5	11	
1935.....	42.2	82	10	4.16	4.52	4.69	3.28	0.1	10	8	4	18	
1936.....	42.2	79	0	1.89	1.15	2.04	2.49	1.4	3	21	4	5	
1937.....	41.0	90	-7	1.85	1.58	1.87	2.11	4.1	7	15	6	9	
1938.....	45.9	89	2	4.28	4.01	4.64	4.20	1.3	6	17	5	8	
1939.....	43.5	78	12	2.58	2.26	2.97	2.42	0.0	7	13	6	11	
Period.....	44.4	90	-9	2.67	2.19	2.63	3.20	1.0	6	14	6	10	



## Climatological Data for November 1939

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.					Precipitation, in inches				Number of days				Prevailing direction of wind	Observers			
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Length of record, years	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelting	With precip., .01 inch or more			Clear	Partly cloudy	Cloudy
Northern Division																					
Bethany.....	Harrison.....	916	44	42.1	- 0.7	72	9	16	4	35	46	1.95	-0.09	1.32	0	3	18	2	10	sw.	A. S. Cumming
Brunswick.....	Chariton.....	652	58	41.8	+ 0.2	74	9	20	4	44	60	2.19	-0.00	0.90	0	6	17	2	11	ne.	O. K. Benecke
Canton, Lock & Dam 20	Lewis.....	488	1	41.7	.....	73	9	20	28	38	9	1.38	-1.33	0.52	0	6	14	2	14	ne.	Lockmaster
Chillicothe.....	Livingston.....	779	30	42.0	+ 0.7	73	9	18	4	41	33	1.75	-0.37	0.80	0	4	15	3	12	ne.	Wm. J. Olenhouse
Clifton Hill.....	Randolph.....	731	40	40.6	- 2.8	72	9	18	2	34	30	2.70	+0.72	1.25	0	8	14	5	11	sw.	Dr. A. J. Bradsher
Columbia.....	Boone.....	740	49	43.5	- 0.6	75	9	22	28	40	49	4.00	+1.80	2.20	0	9	8	10	12	n.	U. S. Weather Bureau
Conception.....	Nodaway.....	980	50	43.2	+ 1.8	73	9	17	2	34	55	2.28	+0.54	1.78	0	4	14	6	10	sw.	Fr. Adelhelm Hess
Edgerton.....	Platte.....	856	19	42.7	+ 0.9	75	9	14	4	41	28	2.43	+0.46	1.58	0	4	19	3	8	n.	Fred L. Stiff
Elsherry.....	Lincoln.....	449	8	42.4	.....	76	9	18	28	50	8	1.97	.....	0.86	T.	5	8	17	5	n.	Ray E. Mills
Fayette.....	Howard.....	760	59	42.4	+ 0.2	74	9	20	4	41	56	2.56	+0.46	0.98	0	8	17	0	13	n.	Irvin E. Schnell
Fulton.....	Callaway.....	818	51	41.6	- 2.6	74	9	19	28	46	47	3.54	+1.23	1.50	0	7	12	7	11	s.	Clyde C. Herring
Graut City.....	Worth.....	1,134	35	42.4	+ 0.5	73	9	16	27	35	47	1.65	-0.20	1.33	0	4	18	2	10	ne.	Howard Rybolt
Hannibal.....	Marion.....	759	47	41.3	- 0.8	73	9	22	2	36	55	1.83	-0.23	0.95	0	7	11	4	15	sw.	Hannibal Water Dept.
Kansas City Airport	Jackson.....	741	50	43.8	+ 0.1	72	9	22	3	33	50	2.45	+0.62	1.36	0	7	13	6	11	sw.	U. S. Weather Bureau
Kansas City Univ.	Jackson.....	908	1	45.4	.....	72	9	22	3	34	1	2.71	.....	1.40	0	8	8	14	8	sw.	University of Kansas City
Kidder.....	Caldwell.....	1,020	47	42.8	+ 1.0	73	9	20	2	34	51	1.66	-0.49	1.04	0	5	19	0	11	sw.	Mrs. Geraldine Terry
King City.....	Gentry.....	1,095	.....	.....	.....	.....	.....	.....	.....	.....	13	2.31	+0.35	1.68	0	4	5	18	7	sw.	John M. Martin
Kirksville.....	Adair.....	969	50	42.0	+ 1.4	73	9	20	3	37	57	2.16	+0.04	1.05	0	6	13	7	10	nw.	Howard Coons
Lawson.....	Ray.....	1,070	1	43.4	.....	72	9	19	2	33	1	2.12	.....	1.27	T.	5	10	10	10	ne.	Elmer E. Lamb
Linneus.....	Linn.....	816	.....	.....	.....	.....	.....	.....	.....	.....	7	1.89	.....	0.82	0	5	16	6	8	sw.	H. D. Taggart
Louisiana.....	Pike.....	469	45	41.2	- 2.9	75	9	17	28	47	58	2.62	+0.16	0.95	0	5	15	5	10	w.	Stark Bro's Nurseries
Macon.....	Macon.....	875	40	41.6	- 1.2	73	9	19	2	38	46	3.06	+0.87	1.80	0	5	14	7	9	sw.	Mrs. W. C. Brown
Maryville.....	Nodaway.....	1,169	49	41.4	+ 2.0	72	9	17	2	34	45	2.11	+0.19	1.41	0	5	17	2	11	se.	R. B. Montgomery
Memphis.....	Scotland.....	787	0	39.5	.....	72	9	21	2	43	9	2.38	-0.61	1.53	0	4	18	1	11	nw.	John W. Alexander
Mexico.....	Audrain.....	800	50	41.8	- 1.1	75	9	19	28	43	61	3.08	+0.85	1.45	0	7	14	5	11	w.	Mrs. Abbie Snoddy
Moberly.....	Randolph.....	875	2	41.6	.....	72	9	20	2	34	2	2.73	.....	1.39	0	7	14	8	8	s.	McCormick Hospital
Oregon.....	Holt.....	1,048	83	44.4	+ 3.9	73	9	17	2	29	83	2.07	+0.09	1.54	0	6	17	4	9	ne.	Miss Mina Wright
St. Charles.....	St. Charles.....	520	51	43.2	- 2.1	74	9	23	28	45	61	2.36	+0.25	0.74	0	9	18	3	9	n.	Martin L. Comann
St. Joseph.....	Buchanan.....	957	29	44.4	+ 2.9	74	9	21	2	30	67	2.73	+1.15	1.72	T.	5	14	6	10	s.	U. S. Weather Bureau
Steffenville.....	Lewis.....	650	41	42.9	- 0.6	74	9	19	2	36	46	2.33	+0.14	1.30	0	8	11	9	10	s.	Frank Hall
Tarkio.....	Atchison.....	916	36	40.8	+ 0.7	71	9	17	27	35	45	0.85	-0.89	0.49	0	4	14	8	8	sw.	Albert Volker
Trenton.....	Grundy.....	822	43	43.8	+ 1.6	72	9	19	4	38	44	1.92	-0.20	0.83	0	4	14	9	7	s.	W. H. Estes
Unionville.....	Putnam.....	1,062	46	42.0	+ 1.7	72	9	20	2	4	46	1.36	-0.84	0.57	0	4	13	3	14	sw.	John H. Schick
Warrenton.....	Warren.....	816	57	42.7	- 0.5	70	9	23	2	32	49	4.87	+2.25	1.70	0	8	9	10	11	ne.	Prof. A. W. Ebeling
Keokuk, Iowa	Lee, Ia.....	574	67	43.0	+ 1.9	70	9	25	28	31	67	1.70	-0.24	0.64	T.	8	12	5	13	sw.	U. S. Weather Bureau
Division means and extremes																					
.....	.....	.....	.....	42.4	+ 0.2	76	9	14	4	50	.....	2.36	+0.17	2.20	0	6	14	6	10	sw.	.....
Southwestern Division																					
Appleton City.....	St. Clair.....	813	44	43.6	- 2.4	73	9	16	4	40	47	2.58	+0.28	1.25	0	7	14	2	14	ne.	Rolla Brown
Bolivar.....	Polk.....	1,071	36	44.8	- 2.0	75	9	19	4	38	44	3.81	+1.23	1.08	0	9	11	7	12	ne.	Southwest Baptist College
Boonville.....	Cooper.....	650	1	42.4	.....	73	9	23	2	33	62	3.22	+1.01	1.38	0	6	13	4	13	se.	Boonville Water Dept.
Clinton.....	Henry.....	786	46	43.3	- 3.7	73	9	17	3	40	52	3.03	+0.87	1.14	0	8	.....	.....	.....	.....	U. S. Weather Bureau
Dean H.....	McDonald.....	1,000	35	45.0	- 4.3	74	7	16	4	49	40	4.36	+1.01	1.22	0	8	10	6	14	n.	E. S. Taylor
Eldon.....	Miller.....	934	44	42.4	- 2.4	75	9	22	5	41	40	3.41	+0.96	1.31	0	8	13	4	11	sw.	E. H. Shepherd
Garber.....	Taney.....	950	5	44.2	.....	77	7	16	28	44	5	2.98	.....	0.77	T.	8	11	1	18	ne.	William H. Durham
Harrisonville.....	Cass.....	904	61	44.0	+ 1.5	72	9	23	27	37	64	2.23	+0.09	1.33	0	8	14	4	12	sw.	John H. Patterson
Jefferson City.....	Cole.....	557	49	42.4	- 1.7	78	9	19	28	40	57	3.54	+1.15	1.20	0	8	15	4	11	e.	Mrs. Frank Kliegel
Lakeside.....	Miller.....	595	8	43.3	.....	76	9	21	4	47	8	3.52	.....	1.39	.....	10	.....	.....	.....	ne.	W. S. Frame
Lamar.....	Barton.....	980	51	43.9	- 2.4	75	7	18	4	46	58	2.47	-0.06	1.10	0	7	12	6	12	ne.	Jesse A. Mann
Lebanon.....	Laclede.....	1,265	51	44.5	- 1.1	74	9	18	4	40	52	3.98	+1.34	0.98	0	8	9	5	16	ne.	Mrs. Rosa E. Montelius
Lexington.....	Lafayette.....	688	54	43.7	- 0.5	72	9	22	2	34	55	2.15	+0.03	1.37	0	6	15	7	8	n.	Miss Carrie Loomis
Lockwood.....	Dade.....	1,078	33	45.4	- 1.6	75	9	20	3	39	43	3.43	+0.59	1.30	0	8	13	6	11	sw.	Hubert A. Nieman
Marshall.....	Saline.....	779	52	44.8	- 0.4	72	9	20	5	39	49	2.70	+0.38	1.10	0	6	16	7	7	sw.	Sec. Chamber of Commerce
Mountain Grove.....	Wright.....	1,463	38	44.8	- 1.1	73	9	20	4	35	42	2.30	-0.65	0.78	0	8	6	13	11	se.	Mo. Fruit Exp. Station
Mount Vernon.....	Lawrence.....	1,174	27	45.0	- 0.8	73	7	19	4	41	39	3.28	+0.34	1.05	T.	7	5	14	11	nw.	G. H. Boswell
Neosho.....	Newton.....	1,011	52	45.4	- 1.9	73	7	17	4	44	56	3.28	-0.02	0.92	T.	8	12	6	12	sw.	U. S. Fisheries Station
Nevada.....	Vernon.....	862	46	45.0	+ 0.2	74	7	15	4	40	47	2.65	+0.50	0.90	0	7	17	2	11	s.	Henry Kraft
Sedalia.....	Pettis.....	910	26	43.6	+ 0.3	74	9	21	3	31	28	2.73	+1.11	1.04	0	9	14	5	11	sw.	Dr. J. E. Cannaday
Seligman.....	Barry.....	1,542	38	45.4	- 1.9	71	9	21	3	33	36	3.07	-0.02	1.11	1.5	6	13	4	12	sw.	Floyd E. Fawver
Seymour (near).....	Webster.....	1,642	33	43.0	- 2.9	73	9	12	4	39	33	3.12	+0.23	1.13	0	6	9	4	17	ne.	A. L. Hailey
Springfield.....	Greene.....	1,301	51	44.6	- 1.1	73	9	24	28	31	51	2.77	-0.02	0.76	T.	10	8	5	17	s.	U. S. Weather Bureau
Versailles.....	Morgan.....	1,037	12	43.4	- 1.5	75	9	18	4	40	15	4.51	+2.14	1.48	0	9	14	6	10	ne.	I. M. Wilson
Warrensburg.....	Johnson.....	878	52	43.8	- 1.2	70	9	21	4	33	59	2.86	+0.64	1.24	0	7	12	4	14	ne.	E. A. Markey
Warsaw.....	Benton.....	687	38	43.3	- 3.9	75	9	17	28	47	44	3.08	+0.44	1.12	0	9	15	2	13	sw.	Everett Martin
Division means and extremes																					
.....	.....	.....	.....	44.0	- 1.6	78	9	12	4	49	.....	2.97	+0.34	1.77	0.1	8	12	5	13	ne.	.....
Southeastern Division																					
Advance.....	Stoddard.....	354	2	44.4	.....	744															



## Day of month

Continued on next page



## Daily Precipitation for November 1939—Continued from preceding page

Stations	Drainage-basins	Day of month																														Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		..
Southeastern Division—Concluded																																	
Bragg City <sup>2</sup>	St. Francis							.01			.86	1.29								.21	.49	.13											2.12
Campbell	do							.08												.20	.44	.01											1.55
Cape Girardeau <sup>2</sup>	Mississippi							.08				.81								T.	.35	.10	.03				T.					T.	1.37
Caruthersville <sup>2</sup>	do							.22				.97								.05	.43	.08											1.75
Centerville <sup>2</sup>	Black										.65	.44						.05		.12	2.16												3.42
Crystal City <sup>2</sup>	Mississippi							.07			.29	.19								.03	.15	1.22									T.		1.95
Cuba <sup>2</sup>	Meramec										.74							.15		.28	1.38	.89									.04		3.48
Dexter <sup>2</sup>	St. Francis							T.			T.	.90								T.	.85	.12					T.						1.87
Douglas	Black										.81									.50	.67	.10									T.		2.08
Farmington	St. Francis							.05			.75							.04		.29	1.25	.31					T.					T.	2.69
Fisk <sup>2</sup>	do										.02	.45								T.	1.17	.07									T.		1.71
Fredericktown <sup>2</sup>	do										.10	.68								.18	1.30	.15											2.41
Goodland	Black										.87								.44		1.93	.34											3.58
Greenville	St. Francis							T.			.65									.25	.65	T.					T.						1.55
Jackson	Mississippi							.08			.95										.87	.14											2.04
Jerome <sup>2</sup>	Gasconade										.30	.25								.35	1.40	.38											2.68
Koshkonong	Black										.81								.07	.70	1.29	T.										.10	2.97
Leeper <sup>2</sup>	do										T.	.70								.15	1.55												2.40
Licking (near)	Gasconade										.52						.10	.07		.31	1.47	.15						T.			T.	12	2.74
Marble Hill	Mississippi										.65									.10	.98	.16											2.59
Meramec Park <sup>2</sup>	Meramec										.84	.25								.46	1.47	.84											3.86
Morehouse	Mississippi										.96									T.	1.06	.08											2.10
New Madrid <sup>2</sup>	do							.04	.01			1.04								.06	.41	.13	.02										1.71
Owensville <sup>2</sup>	Gasconade										.72									.21	1.10	.49											2.52
Pacific <sup>2</sup>	Meramec										.85											1.40										T.	2.25
Parma <sup>2</sup>	St. Francis										.92									.35	.25	.40											1.92
Poplar Bluff <sup>2</sup>	Black							.04			.11									.90	1.02	.15											2.22
Richwoods <sup>2</sup>	Meramec										.60								.05	.10	1.27	.45										T.	2.47
Rolla	do							T.	T.		.65									.05	.46	1.94	.15		.02	.03	.01		.01	.09			3.51
St. Louis <sup>1</sup>	Mississippi							.04			.73								T.	T.	.44	.76	.11		.01	.01			T.	.33			2.43
St. Louis Airport <sup>3</sup>	Missouri							.07	.01		.77									.01	.34	.74	.09		.02	T.			T.	.37			2.42
St. Louis University <sup>3</sup>	Mississippi							T.			.60								T.	.43	.57	.07		.02	T.				.01	.25			1.95
Salem	Meramec										.55							.15		.76	1.03	.24									T.		2.90
Sikeston <sup>2</sup>	Mississippi										.85	T.	T.							.06	.57	.30	.06	T.									1.84
Union	Meramec							.04			.76									.30	1.52	.13									.04		2.79
Valley Park <sup>2</sup>	do							.05			.50	.37							T.	.12	.79	.51	T.					.02					2.26
Van Buren	Black										.51									.21	.91	.13											1.89
Wappapello Dam <sup>2</sup>	St. Francis							.08			.08	.61								.11	.91	.14	T.					T.				T.	1.93
Washington Univ. <sup>3</sup>	Mississippi							.05			.54	.21								.14	.64	.43						.01					2.03
West Plains	Black							T.			.89							.04	.01	.28	1.29	T.			T.	T.				T.	.32		2.53
Williamsville <sup>2</sup>	do							.13			.03	.71								.14	1.15	.15											2.31
Willow Sprgs. (near) <sup>2</sup>	White										T.											.07	T.										1.90
Zalma (near) <sup>2</sup>	Mississippi							.04			T.	.70								.06	1.03	.07	T.										2.22
Cairo, Ill. <sup>1</sup>	do							T.	T.			.77								T.	.04	.92	.16					.06			T.	.27	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation.

<sup>1</sup> First-order Weather Bureau station; precipitation is for the 24-hour period, midnight to midnight, unless otherwise indicated. <sup>2</sup> Precipitation is measured in the morning; amount then recorded is for the preceding 24 hours. <sup>3</sup> Precipitation is for 24-hour period, midnight to midnight. <sup>4</sup> Precipitation measured with recording gage. <sup>5</sup> Included in next measurement. T. Trace, or precipitation less than 0.01 inch. \* Estimated. || Partially estimated. |||| Incomplete.

NOTE:—In addition to the stations shown on daily temperature page, records of daily temperatures are kept at the following stations in Missouri: Advance, Appleton City, Bethany, Bolivar, Booneville, Campbell, Canton Lock No. 20, Clifton Hill, Columbia Airport, Conception, Dean, Edgerton, Elsberry, Fulton, Goodland, Greenville, Kansas City University, Kidder, Kirksville Airport, Koshkonong, Lakeside, Licking (near), Lockwood, Marble Hill, Memphis, Mount Vernon, St. Joseph Airport, St. Louis Airport, St. Louis University, Saverton Lock No. 22, Seligman, Seymour (near), Springfield Airport, Steffenville, Tarkio, Versailles, Wappapello Dam, Warsaw, and Washington University.

## Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for November 1939

(See precipitation data in daily precipitation table)

Station	Data	Day of month																														Monthly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Columbia	{ Evaporation .....																															.....
	{ Mean temperature ..																															.....
	{ Wind movement ..																															.....
Lakeside (Osage Dam)	{ Evaporation .....	.085	.128	.051	.053	.050	.065	.065	.103	.124	.194	.085	.053	.046	.063	.061	.037	.005	.006	.032	.034	.023	.039	.041	.032	.040	.013	.024	.033	.041	****	1.614
	{ Mean temperature ..	44	36	36	36	41	44	51	48	56	50	44	44	44	46	46	43	52	53	50	42	40	38	42	37	41	36	38	40	36	46	43.3
	{ Wind movement ..	64	54	24	41	21	47	42	18	50	109	46	22	29	17	11	7	9	20	35	35	47	21	35	52	93	46	29	28	20	42	1,114
St. Louis (Washington University)	{ Evaporation .....	.073	.109	.069	.052	.056	.052	.026	.128	.092	.122	.060	.060	.054	.044	.077	.065	.034	.025	.015	.001	.028	.024	.022	.018	.008	.050	.031	.023	.011	.020	1.449
	{ Mean temperature ..	44	36	38	40	42	44	50	48	55	49	42	42	42	48	48	48	56	54	50	40	34	36	38	38	42	38	36	36	38	42	43.2
	{ Wind movement ..	23	50	62	43	16	25	14	35	30	88	32	19	40	11	12	9	5	15	9	103	62	28	24	18	62	76	55	8	4	16	994

Observations taken at 8:00 a. m. except at 7:30 a. m. at Lakeside. For Columbia, Lakeside, and St. Louis (Washington University) descriptions see July 1938, April 1932, and August 1938 reports respectively. \* Included in next measurement. \*\*\*\* —.012.



## Daily Temperatures for November 1939

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Mean		
Northern Division																																	
Brunswick §§.....	Maximum...	51	41	50	52	56	58	65	58	74	54	62	58	60	65	67	61	56	56	52	44	45	49	54	48	44	41	46	51	44	46	53.7	
Chillicothe §§.....	Minimum...	26	22	22	20	20	23	21	38	38	42	30	30	25	25	28	28	43	48	51	39	27	26	25	29	37	35	20	20	20	29.9		
Columbia.....	Maximum...	49	43	49	52	57	56	63	56	73	53	63	56	62	65	69	64	54	52	48	48	50	54	49	44	41	47	49	46	46	53.5		
Fayette.....	Minimum...	28	21	25	18	23	18	22	36	37	41	28	32	24	35	32	39	44	48	47	36	24	23	25	35	36	36	21	20	21	30.6		
Grant City.....	Maximum...	51	43	46	48	56	56	64	56	75	62	61	54	60	65	68	60	55	56	53	41	45	46	49	45	43	39	45	49	45	52.9		
Hannibal.....	Minimum...	31	24	32	23	32	25	43	39	45	35	31	30	24	35	28	47	49	52	41	38	29	25	32	38	33	33	22	22	38	34.1		
Kansas City Airport.....	Maximum...	52	44	44	48	57	51	64	57	74	70	60	54	59	63	68	58	54	54	46	41	45	53	47	41	40	41	50	43	46	52.8		
Kirksville.....	Minimum...	34	21	27	20	25	21	40	37	41	39	27	34	22	29	27	41	44	51	46	38	29	25	32	38	33	33	22	20	32	32.0		
Lawson.....	Maximum...	58	39	49	50	55	52	64	55	73	59	64	56	61	64	68	67	53	56	55	49	50	53	60	50	42	45	48	46	52	54.6		
Louisiana.....	Minimum...	26	17	20	21	26	19	30	31	41	39	31	31	30	32	33	34	40	42	40	38	24	22	31	31	34	35	16	21	39	30.2		
Macon§§.....	Maximum...	47	42	39	48	51	51	59	54	73	68	59	60	58	61	63	57	55	55	52	42	40	38	46	43	41	40	37	49	42	50.3		
Maryville.....	Minimum...	32	22	29	25	29	27	42	31	37	39	26	31	29	31	33	44	45	48	40	35	29	23	26	32	37	33	23	22	30	32.3		
Mexico §§.....	Maximum...	51	40	46	50	57	59	66	58	72	54	60	54	60	62	64	58	55	56	53	46	47	46	57	44	45	41	45	48	47	52.9		
Moberly.....	Minimum...	32	25	22	22	32	26	37	35	46	37	33	33	30	42	31	41	49	50	44	33	30	29	38	34	35	33	26	24	41	31.6		
Oregon.....	Maximum...	52	39	45	48	53	52	60	55	73	68	60	56	58	61	65	62	55	55	51	43	41	45	49	47	43	40	44	46	48	52.0		
St. Charles §§.....	Minimum...	34	21	20	22	27	25	38	31	36	41	28	30	29	35	35	42	42	42	40	32	25	23	34	35	31	34	21	22	34	32.0		
St. Joseph.....	Maximum...	51	40	47	49	56	58	63	57	72	66	61	53	60	63	67	59	53	52	51	45	47	50	54	49	43	41	46	48	45	53.2		
Trenton.....	Minimum...	31	19	27	25	29	32	35	34	42	40	34	33	30	35	34	39	47	50	45	36	26	26	32	34	34	31	25	25	39	33.6		
Unionville §§.....	Maximum...	41	50	45	52	55	51	65	60	75	50	50	34	33	30	35	34	39	47	50	45	36	28	22	20	34	38	36	20	17	26	42.2	
Warrenton.....	Minimum...	33	28	22	18	20	20	44	34	28	42	31	33	20	30	25	32	38	50	45	36	28	22	20	34	38	36	20	17	26	42.2		
Keokuk, Iowa.....	Maximum...	50	44	46	49	54	53	63	54	73	53	61	53	58	62	65	62	55	55	51	43	43	43	45	50	46	42	38	45	50	44	51.8	
Clinton.....	Minimum...	29	19	28	21	22	26	36	31	35	40	39	33	29	28	33	32	35	39	40	42	40	38	28	27	33	32	32	24	25	38	31.5	
Eldon§§.....	Maximum...	53	44	49	50	58	57	67	56	75	55	61	53	60	66	69	63	60	56	56	44	46	45	48	48	48	48	48	48	48	48	53.6	
Garber.....	Minimum...	30	20	24	20	23	28	34	37	37	38	26	32	21	33	26	32	45	48	48	38	26	24	25	32	36	33	20	19	23	37	30.0	
Harrisonville§§.....	Maximum...	50	40	45	47	52	54	64	58	72	67	55	58	55	54	61	58	52	45	41	51	40	31	26	25	34	36	32	22	20	35	51.4	
Jefferson City §§.....	Minimum...	32	20	27	26	21	40	33	38	40	26	32	25	37	39	41	41	51	51	40	31	26	25	26	34	36	32	22	20	35	42	31.9	
Lamar§§.....	Maximum...	55	37	48	50	57	55	63	58	73	59	61	58	62	60	67	64	55	56	53	47	48	51	59	52	42	42	47	47	53	52	54.3	
Lebanon.....	Minimum...	31	17	27	36	30	34	35	35	44	40	38	30	35	39	38	40	45	45	44	32	29	29	36	32	30	33	23	26	40	39	34.4	
Lexington§§.....	Maximum...	57	46	45	61	61	59	63	54	74	56	56	52	63	71	72	63	64	59	52	41	39	45	51	48	40	40	48	52	47	48	53.9	
Marshall.....	Minimum...	34	29	29	27	28	28	30	40	38	44	28	35	25	27	27	30	41	50	48	39	31	27	25	30	40	42	45	46	52	44	38	32.4
Mountain Grove.....	Maximum...	28	21	30	29	33	32	37	39	41	41	39	34	31	40	42	49	49	49	43	33	32	27	36	33	34	29	23	28	41	42	35.5	
Neosho.....	Minimum...	55	56	49	52	59	60	64	62	72	60	62	54	62	64	68	65	66	59	55	49	48	54	52	48	46	43	48	48	46	55.5		
Springfield.....	Maximum...	30	20	29	19	28	21	38	34	44	41	29	30	27	29	30	40	41	50	40	35	25	24	30	38	35	36	21	20	37	38	32.0	
Warrenton.....	Minimum...	46	41	50	52	51	50	65	59	72	53	63	58	60	64	71	69	55	57	58	45	50	53	53	50	45	45	49	48	46	46	54.3	
Clinton.....	Maximum...	27	20	20	25	25	26	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29.6	
Eldon§§.....	Minimum...	52	49	41	43	53	53	63	60	70	69	56	56	54	58	58	55	63	61	55	46	38	38	45	46	44	41	39	41	45	47	51.4	
Garber.....	Maximum...	43	41	43	47	52	54	58	60	70	58	58	51	60	61	67	61	57	54	52	41	42	43	49	42	44	40	44	48	44	50	50.9	
Harrisonville§§.....	Minimum...	32	27	33	28	35	29	44	33	39	34	31	34	31	39	38	44	41	51	41	35	32	27	32	38	39	35	26	25	37	43	35.2	
Jefferson City §§.....	Maximum...	59	47	47	52	56	60	70	63	73	69	58	54	62	64	68	57	55	60	59	49	49	52	58	47	44	43	45	53	44	45	55.4	
Lamar§§.....	Minimum...	27	25	17	19	20	22	34	33	41	43	29	35	22	28	28	45	49	50	47	38	24	25	27	30	34	30	21	21	32	40	31.2	
Lebanon.....	Maximum...	58	44	41	51	59	60	67	59	75	51	51	61	66	70	60	55	56	50	42	49	48	55	46	43	38	44	57	45	49	45	53.6	
Lexington§§.....	Minimum...	28	28	27	23	22	26	26	38	37	37																						







# CLIMATOLOGICAL DATA

19

## MISSOURI SECTION

W. J. MOXOM  
ST. LOUIS, MO.

VOL. XLIII

DECEMBER 1939

No. 12

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### GENERAL SUMMARY

The weather in Missouri during the first two-thirds of December was unusually mild, with temperature averaging approximately ten to twelve degrees above normal. The highest temperatures during the month occurred from the 6th to the 10th at most stations, and on the 17th and 18th at a few stations. All stations in the southeastern and southwestern divisions, and more than half of those in the northern division, reported maximum temperatures of 70° or higher, with the highest 80°, at Lebanon. Cold weather overspread the State on the 20th, and temperatures were continuously below normal during the last ten days, with minimum temperatures zero and lower at a number of stations during the last three days.

Precipitation was general over the State on the 1st, which was followed by a protracted period of dry weather with ample sunshine until the 23d, when a blanket of snow covered most of the State. The precipitation for the month averaged approximately 68 per cent of the normal and was distributed on the 1st and from the 23d to 31st. The snowfall averaged nearly twice the normal amount for December, and occurred during the last eight days of the month. The greatest depth reported for the month was 13.5 inches at Warrenton, Mo.

Unusually low river stages prevailed throughout the State during December, and at St. Louis the gage readings were below the zero of gage during the entire month, ranging from -1.3 to -3.6 feet. The first floating ice of the season in the Mississippi River at St. Louis was on December 30th.

### TEMPERATURE

The monthly mean for the State, 84 stations reporting, was 38.8°, or 4.6° above normal. The highest monthly mean was 45.2° at Seligman, and the lowest monthly mean was 33.2° at Memphis. The highest recorded was 80° at Lebanon on the 10th, and the lowest was 5° below zero at Fulton on the 31st. The greatest daily range was 51° at Union on the 6th and 9th.

### PRECIPITATION

The average for the State, 144 stations reporting, was 1.45 inches, or 0.69 inch less than normal. The greatest local monthly amount was 2.61 inches at Ozark Beach, and the least local monthly amount was 0.48 inch at Maryville and Tarkio. The greatest amount in any twenty-four hours was 1.40 inches at Neosho on the 23d-24th. The average number of days with 0.01 inch or more was 6.

The snowfall averaged 6.3 inches, or 2.9 inches more than normal. The greatest local monthly snowfall was 13.5 inches at Warrenton.

### MISCELLANEOUS PHENOMENA

Dust.—Locally on 12th.

Fog.—Dense, 8th, 16th, 17th, 18th, 25th, 26th, 27th, 28th, 29th.

Glaze.—22d, 23d.

Halos.—Solar, 3d, 5th, 7th, 10th, 14th, 16th, 19th, 22d, 25th; lunar, 14th, 16th, 20th, 24th, 25th.

Sleet.—22d, 23d, 24th, 25th, 26th, 27th, 31st.

### PRESSURE, WIND, HUMIDITY, AND SUNSHINE

Stations	Atmospheric pressure (reduced to sea level)					Wind				Relative humidity			Percentage of sunshine
	Mean	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	6:30 a. m.	12:30 p. m.	6:30 p. m.	
Columbia.....	30.03*	30.39*	24	29.68*	18	7.5	25	nw.	13	80*	62*	65*	45
Kan. C. Airport.	30.03	30.41	24	29.70	18	9.7	34	nw.	1	76	54	55	61
St. Joseph.....	30.03*	30.42*	24	29.71*	18	8.4	31	nw.	12	84*	60*	67*	54
St. Louis.....	30.02*	30.38*	24	29.68*	2	11.9	26	nw.	19	72	56	61	49
Springfield.....	30.04*	30.38*	13	29.67*	23	9.2	26	nw.	2	81*	56*	66*	55
Cairo, Ill.....	30.04	30.40	14	29.61	26	9.0	25	ne.	23	78	60	65	60
Keokuk, Iowa..	30.01	30.43	24	29.62	1	7.9	24	nw.	12	75	57	59	53

\* Data for Airport Station.

### COMPARATIVE DATA FOR DECEMBER

Year	Temperature			Precipitation						Number of days			
	Average for State	Highest	Lowest	Average for State	Average, Northern Division	Average, Southwestern Division	Average, Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy	
1888.....	35.9	70	0	2.43	1.88	3.03	2.39	....	6	..	..	..	..
1889.....	46.8	80	— 3	1.09	0.60	0.85	1.82	0.1	3	..	..	..	..
1890.....	36.0	76	— 3	1.18	0.82	1.14	1.57	4.6	3	..	..	..	..
1891.....	39.8	72	— 1	1.88	1.91	1.67	2.05	....	6	..	..	..	..
1892.....	29.4	75	— 22	2.50	1.69	2.76	3.04	4.8	6	8	7	16	..
1893.....	35.2	76	— 7	0.97	0.80	0.67	1.44	2.7	5	11	11	9	..
1894.....	36.7	75	— 7	2.41	1.19	2.33	3.70	1.3	5	14	8	9	..
1895.....	34.3	69	— 8	6.40	5.12	8.57	5.50	3.4	8	9	8	14	..
1896.....	38.6	79	— 5	0.92	0.84	1.17	0.75	T.	3	13	8	10	..
1897.....	29.3	74	— 14	3.03	1.92	2.92	4.19	6.3	7	8	8	15	..
1898.....	28.7	74	— 20	1.65	1.62	1.84	1.48	5.1	5	17	6	8	..
1899.....	30.4	75	— 13	2.22	1.90	2.02	2.74	6.6	9	12	9	10	..
1900.....	35.6	68	— 3	0.79	0.47	0.55	1.35	0.6	4	14	8	9	..
1901.....	28.5	71	— 29	3.20	2.26	2.98	4.35	6.9	8	11	7	13	..
1902.....	30.7	68	— 7	3.32	2.02	2.76	5.18	3.1	8	10	4	17	..
1903.....	30.2	65	— 11	1.70	1.05	1.56	2.49	2.3	5	16	7	8	..
1904.....	32.9	75	— 10	1.55	1.56	1.24	1.81	6.0	5	16	7	8	..
1905.....	33.3	66	— 2	1.71	0.79	1.44	2.80	1.7	4	18	6	7	..
1906.....	36.1	73	0	2.52	1.67	1.85	4.15	0.6	8	8	6	17	..
1907.....	37.7	76	3	1.75	1.22	1.69	2.34	3.7	7	11	7	13	..
1908.....	38.4	80	— 4	0.78	0.54	0.64	0.86	T.	3	16	7	8	..
1909.....	24.9	76	— 17	2.87	2.82	2.80	3.00	7.7	8	12	6	13	..
1910.....	31.2	67	— 5	1.49	0.94	1.14	2.40	2.4	4	16	5	10	..
1911.....	36.7	74	— 11	2.85	2.74	2.56	3.26	5.1	7	13	6	12	..
1912.....	36.5	72	— 2	0.62	0.54	0.49	0.82	0.6	3	19	5	7	..
1913.....	38.3	74	— 3	2.26	2.11	2.84	1.83	6.6	7	9	4	18	..
1914.....	26.8	68	— 18	2.51	1.69	2.20	3.65	6.6	9	7	5	19	..
1915.....	34.7	68	— 13	2.99	1.48	2.45	5.03	7.8	6	12	6	13	..
1916.....	31.3	82	— 29	1.92	0.78	1.54	3.44	4.4	6	15	6	10	..
1917.....	25.5	82	— 23	0.76	0.41	0.75	1.13	7.3	5	11	7	13	..
1918.....	40.0	83	— 12	3.23	2.27	2.81	4.62	7.8	7	13	6	12	..
1919.....	28.5	74	— 22	0.72	0.41	0.66	1.08	0.7	3	12	4	15	..
1920.....	35.6	77	— 10	2.12	1.25	1.49	3.61	2.3	5	13	7	11	..
1921.....	36.9	74	— 8	1.97	1.26	2.00	2.65	1.9	6	13	7	11	..
1922.....	36.3	75	— 6	2.27	0.75	1.71	4.35	0.2	6	15	6	10	..
1923.....	41.0	82	— 4	3.07	1.63	2.96	4.62	0.8	8	11	6	14	..
1924.....	27.7	80	— 28	3.48	2.94	3.45	4.06	4.6	7	13	6	12	..
1925.....	31.6	69	— 10	1.43	1.53	1.27	1.50	4.8	4	13	7	11	..
1926.....	32.6	75	— 12	2.16	1.17	2.12	3.20	2.4	6	11	5	15	..
1927.....	29.9	74	— 11	2.81	1.64	2.55	4.23	2.9	6	15	5	11	..
1928.....	36.2	81	0	2.29	1.37	2.49	3.00	1.4	5	14	6	11	..
1929.....	35.2	76	— 9	1.74	0.67	1.11	3.43	3.7	6	13	5	13	..
1930.....	34.2	70	— 2	1.24	0.79	1.35	1.57	1.9	5	15	6	10	..
1931.....	42.7	80	11	2.71	2.53	1.51	4.10	1.7	8	11	6	14	..
1932.....	31.2	77	— 21	4.74	3.18	4.98	6.07	5.7	7	12	6	13	..
1933.....	39.1	78	— 7	1.92	1.52	1.67	2.56	0.4	5	12	7	12	..
1934.....	31.6	69	— 3	1.80	0.94	1.72	2.74	5.0	7	10	6	15	..
1935.....	30.7	68	— 11	1.20	0.85	1.03	1.73	2.8	6	11	7	13	..
1936.....	38.4	69	— 7	2.83	2.19	2.71	3.60	2.2	7	12	7	12	..
1937.....	32.0	66	— 2	2.24	1.50	1.90	3.32	0.6	9	8	6	17	..
1938.....	35.9	72	— 2	1.83	1.66	1.52	2.32	0.2	6	15	7	9	..
1939.....	38.8	80	— 5	1.45	1.11	1.46	1.79	6.3	6	15	7	9	..
Period.....	34.2	83	— 29	2.14	1.51	2.02	2.90	3.4	6	13	6	12	..



## Climatological Data for December 1939

Stations	Counties	Elevation, feet	Temperature, in degrees Fahr.							Precipitation, in inches				Number of days				Prevailing direction of wind	Observers			
			Length of record, years	Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Length of record, years	Total	Departure from the normal	Greatest in 24 hours	Total snowfall, unmelted	With precip., of inch or more	Clear			Partly cloudy	Cloudy	
Northern Division																						
Bethany	Harrison	916	44	36.0	+ 5.9	69	6†	- 1	31	44	46	0.77	-0.38	0.70	7.0	3	21	6	4	nw.	A. S. Cumming	
Brunswick	Chariton	652	58	36.8	+ 6.2	69	17	- 3	31	40	60	1.23	-0.44	0.49	5.8	7	18	3	10	nw.	O. K. Bonecke	
Canton, Lock & Dam 20	Lewis	488	1	37.2	.....	68	18	- 3	31	36	9	0.75	-0.88	0.37	4.7	4	12	11	8	nw.	Lockmaster	
Chillicothe	Livingston	779	30	36.8	+ 6.9	70	6	- 1	31	42	33	1.32	-0.10	0.50	8.2	6	15	8	8	nw.	Wm. J. Olenhouse	
Clifton Hill	Randolph	731	40	35.4	+ 4.4	69	17	- 1	31	30	30	1.03	-0.69	0.24	6.9	9	13	6	12	nw.	Dr. A. J. Bradsher	
Columbia	Boone	740	49	38.2	+ 4.2	71	18	- 2	31	35	49	1.16	-0.70	0.69	7.0	8	9	10	12	w.	U. S. Weather Bureau	
Conception	Nodaway	980	50	36.2	+ 7.0	71	6	0	31	40	55	0.69	-0.19	0.32	6.0	5	14	11	6	nw.	Fr. Adelhelm Hess	
Edgerton	Platte	856	19	37.8	+ 7.4	75	6	3	29	49	28	1.28	+0.16	0.64	3.4	7	17	2	12	n.	Fred L. Stiff	
Elsberry	Lincoln	449	8	36.0	.....	71	9	4	25	49	8	1.28	.....	0.57	8.0	5	9	12	10	nw.	Ray E. Mills	
Fayette	Howard	760	59	37.6	+ 6.5	71	18	- 1	31	35	56	1.10	-0.56	0.63	7.2	9	18	3	10	nw.	Irvin E. Schnell	
Fulton	Callaway	818	51	35.6	+ 2.1	72	9	- 5	31	41	47	1.70	-0.31	0.72	7.3	6	17	4	10	nw.	Clyde C. Herring	
Grant City	Worth	1,134	35	36.4	+ 8.4	71	6	- 2	31	43	47	0.95	-0.11	0.36	8.0	6	12	12	7	nw.	Howard Rybolt	
Hannibal	Marion	759	47	36.8	+ 5.3	69	18	- 2	31	35	55	1.46	-0.68	0.60	8.9	6	13	7	11	nw.	Hannibal Water Dept.	
Kansas City Airport	Jackson	741	50	39.4	+ 6.9	74	6	7	29	41	50	0.68	-0.65	0.48	4.1	6	9	10	12	sw.	U. S. Weather Bureau	
Kansas City Univ.	Jackson	908	1	39.0	.....	76	6	6	29	45	1	0.72	.....	0.27	3.9	5	16	7	8	s.	University of Kansas City	
Kidder	Caldwell	1,020	47	37.4	+ 8.2	69	6	0	31	35	51	1.46	+0.19	0.66	6.0	6	23	2	6	nw.	Mrs. Geraldine Terry	
King City	Gentry	1,095	5	37.8	.....	70	6	- 2	31	34	1	1.18	-0.64	0.49	8.9	6	7	19	5	sw.	John M. Martin	
Kirksville	Adair	969	50	35.6	+ 6.0	65	6†	- 2	31	34	1	1.18	-0.64	0.49	8.9	6	7	19	5	nw.	Howard Coons	
Lawson	Ray	1,070	1	37.8	.....	70	6	- 4	31	34	1	1.18	-0.64	0.49	8.9	6	7	12	11	8	nw.	Elmer E. Lamb
Linneus	Linlin	816	1	37.8	.....	70	6	- 4	31	34	1	1.18	-0.64	0.49	8.9	6	7	12	11	8	nw.	H. D. Taggart
Louisiana	Pike	469	45	36.0	+ 4.2	70	10†	- 3	30†	43	58	1.20	-0.70	0.40	9.2	4	16	7	8	w.	Stark Bros' Nurseries	
Macon	Macon	875	40	35.2	+ 5.1	68	17†	- 3	31	37	46	1.26	-0.38	0.60	7.5	5	16	7	8	w.	Mrs. W. C. Brown	
Maryville	Nodaway	1,169	49	35.4	+ 8.6	70	6	- 1	31	39	45	0.48	-0.60	0.12	5.0	8	16	4	11	nw.	R. B. Montgomery	
Memphis	Scotland	787	0	33.2	.....	66	18	- 4	31	41	9	1.17	-0.11	0.43	6.9	5	21	0	10	sw.	John W. Alexander	
Mexico	Audrain	800	50	35.9	+ 4.1	70	9†	- 2	31	42	61	1.92	+0.01	.....	10.9	7	20	2	9	n.	Mrs. Abbie Snoddy	
Moberly	Randolph	875	2	36.8	.....	69	18	0	31	34	2	0.78	.....	0.21	3.9	6	15	8	8	w.	McCormick Hospital	
Oregon	Holt	1,048	83	37.4	+ 8.7	72	6	0	29	37	83	0.89	-0.15	0.34	4.5	9	16	13	2	nw.	Miss Mina Wright	
St. Charles	St. Charles	920	51	37.0	+ 2.1	74	9	0	31	42	61	2.49	+0.70	1.20	11.5	7	18	5	8	sw.	Martin L. Comann	
St. Joseph	Buchanan	957	29	38.0	+ 8.4	72	6	6	29	37	67	0.72	-0.57	0.49	3.5	6	13	7	11	nw.	U. S. Weather Bureau	
Steffenville	Lewis	650	41	36.8	+ 6.2	68	18	- 4	31	34	46	1.16	-0.53	0.42	8.5	5	13	9	9	n.	Frank Hall	
Tarkio	Atchison	916	36	34.6	+ 8.2	71	6	- 1	29	41	45	0.48	-0.48	0.38	7.0	5	15	9	7	nw.	Albert Volker	
Trenton	Grundy	822	43	37.8	+ 8.2	69	6	- 1	31	40	44	1.20	-0.21	0.47	5.8	5	15	5	11	n.	W. H. Estes	
Unionville	Putnam	1,062	46	36.4	+ 8.8	70	18	- 1	31	38	46	1.10	-0.61	0.42	6.0	4	16	4	11	sw.	John H. Schick	
Warrenton	Warren	816	57	37.8	+ 5.4	69	9†	- 2	31	31	49	1.61	-0.47	0.40	13.5	4	10	9	12	nw.	Prof. A. W. Ebeling	
Keokuk, Iowa	Lee, Ia.	574	67	36.1	+ 6.5	68	18	- 2	31	30	67	0.34	-1.11	0.31	5.9	3	10	9	12	nw.	U. S. Weather Bureau	
Division means and extremes																						
..... 36.7 + 6.3 76 6 - 5 31 49 .. 1.11 -0.40 1.20 6.7 6 14 8 9 nw.																						
Southwestern Division																						
Appleton City	St. Clair	813	44	39.3	+ 4.7	73	6	0	29	44	47	0.93	-0.66	0.60	3.0	4	17	4	10	sw.	Rolla Brown	
Bolivar	Polk	1,071	36	42.6†	+ 7.0	74	6	1	29	37	44	1.57	-0.77	.....	6.5	6	17†	5†	5†	sw.	Southwest Baptist College	
Boonville	Cooper	650	1	36.5	.....	71	18	8	31	35	62	0.97	-0.73	0.32	5.9	6	16	4	11	se.	Boonville Water Dept.	
Clinton	Henry	786	46	39.4	+ 4.7	72	6	2	29	39	52	0.88	-0.99	0.58	3.5	7	.....	.....	.....	.....	U. S. Weather Bureau	
Dean	McDonald	1,000	35	41.8	+ 4.3	76	7†	5	29	49	40	1.10	-1.25	0.80	3.5	3	14	8	9	w.	E. S. Taylor	
Eldon	Miller	934	44	38.2	+ 3.9	75	9	2	31	45	40	1.92	+0.16	0.90	5.6	6	16	5	10	n.	E. H. Shepherd	
Garber	Taney	950	5	40.7	.....	76	6	4	29	50	5	2.57	.....	1.01	5.8	7	10	9	12	e.	William H. Durham	
Harrisonville	Cass	904	61	37.6	+ 6.3	74	6	0	29†	41	64	1.27	-0.18	0.41	4.0	5	17	2	12	nw.	John H. Patterson	
Jefferson City	Cole	557	49	36.6	+ 3.7	71	9†	0	31	43	57	2.07	+0.13	1.10	7.7	6	17	6	8	w.	Mrs. Frank Kliegel	
Lakeside	Miller	595	8	38.6	.....	74	9	9	31	46	8	2.00	.....	1.33	7	.....	.....	.....	.....	sw.	W. S. Frame	
Lamar	Barton	980	51	40.5	+ 5.3	75	9	0	29	41	58	1.73	-0.15	0.50	7.0	5	18	4	9	sw.	Jesse A. Mann	
Lebanon	Laclede	1,265	51	41.8	+ 7.0	80	10	4	29	41	52	1.08	-1.20	0.76	8.0	6	12	9	9	sw.	Mrs. Rosa E. Montelius	
Lexington	Lafayette	688	54	38.6	+ 6.6	74	6	6	31	38	55	1.59	0.00	0.72	6.5	7	16	7	8	sw.	Miss Carrie Loomis	
Lockwood	Dade	1,078	33	41.1	+ 5.0	74	6	3	29	44	43	1.42	-0.72	0.81	5.5	3	19	3	9	sw.	Hubert A. Nieman	
Marshall	Saline	779	52	38.8	+ 6.9	70	18	4	31	36	49	0.90	-0.85	0.52	4.5	4	22	3	6	sw.	Sec. Chamber of Commerce	
Mountain Grove	Wright	1,463	38	41.0	+ 6.3	72	6†	8	29	32	42	1.88	-0.53	0.82	10.5	9	10	14	7	nw.	Mo. Fruit Exp. Station	
Mount Vernon	Lawrence	1,174	27	41.7	+ 6.2	75	6	3	29	38	39	1.67	-0.87	1.02	6.0	3	12	12	7	nw.	G. H. Boswell	
Neosho	Newton	1,011	52	42.0	+ 4.9	73	9	4	29	39	56	1.67	-0.61	1.40	2.8	4	21	1	9	nw.	U. S. Fisheries Station	
Nevada	Vernon	862	46	41.8	+ 6.5	75	6	0	29	38	47	1.58	-0.17	0.90	5.7	6	19	2	10	sw.	Henry Kraft	
Sedalia	Pettis	910	26	39.2	+ 5.3	72	18	2	31	36	28	1.01	-0.27	0.51	6.1	7	18	4	9	sw.	Dr. J. E. Cannaday	
Seligman	Barry	1,542	38	45.2†	+ 7.9	73	6	8	29	37	36	1.37	-0.83	0.87	4.0	3	16†	3†	2†	sw.	Floyd E. Fawer	
Seymour (near)	Webster	1,642	33	40.2	+ 4.8	71	10	2	29	37	33	1.41	-0.85	0.75	5.8	5	18	5	8	nw.	A. L. Hailey	
Springfield	Greene	1,301	51	40.8	+ 4.6	72	6	8	29	35	51	1.66	-0.65	0.99	7.0	4	12	9	10	w.	U. S. Weather Bureau	
Versailles	Morgan	1,037	12	39.1	+ 3.7	73	6	0	31	40	15	1.67	-0.20	0.95	7.0	7	18	2	11	nw.	F. M. Wilson	
Warrensburg	Johnson	878	52	39.4	+ 6.0	71	6	2	29	35	59	1.41	-0.13	0.62	10.2	6	13	5	13	sw.	E. A. Markey	
Warsaw	Benton	687	38	39.7	+ 4.0	74	6	3	29	46	44	1.00	-1.									



## Day of month

Continued on next page



## Daily Precipitation for December 1939—Continued from preceding page

Stations	Drainage-basins	Day of month																															Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>Southeastern Division—Concluded</i>																																		
Bragg City <sup>2</sup>	St. Francis	.56												.07						T.					.50	.70			.37	.23			2.43	
Campbell	do	.36												.08						.04					1.05	.15		.32	.10			.02	2.12	
Cape Girardeau <sup>2</sup>	Mississippi	.50	.03	T.										T.										.06	.54			.20					1.33	
Caruthersville <sup>2</sup>	do	.60																		.37					.50	.50		.45	.11				2.53	
Centerville <sup>2</sup>	Black	.31																						.30	.50	.50		.40					2.01	
Crystal City <sup>2</sup>	Mississippi	.38	.01																					.17	.57			.27	T.				1.40	
Cuba <sup>2</sup>	Meramec	.27															.11								.40				.35	.05			1.18	
Dexter <sup>2</sup>	St. Francis	.62		T.																				.47	.98			.45					2.57	
Doniphan	Black												T.											.93			.52	.04				.07	1.56	
Farmington	St. Francis	.17																		T.					.43	.26		.11	.11	T.			T.	1.08
Fisk <sup>2</sup>	do	.48												.04				T.							.53	.52			.39				T.	1.96
Fredericktown <sup>2</sup>	do	.32																							.19	.75		.26						1.43
Goodland	Black	.27																							.60	.65	.15	.45				T.		2.12
Greenville	St. Francis																								.75	.10	.25	.10						1.20
Jackson	Mississippi	.59																							.69	.21			.80					2.29
Jerome <sup>2</sup>	Gasconade	.34																		.07					.25	.69		.40			.05			1.71
Koshkonong	Black	.53																						T.	.89	.03		.50	.46				.15	2.16
Leeper <sup>2</sup>	do	.42																		T.					.40	.70			.05					1.97
Licking (near)	Gasconade	.23	T.																						.02	1.11		.25	.12	T.		.02	1.78	
Marble Hill	Mississippi	.39																							.70	.19		.55						1.83
Meramec Park <sup>2</sup>	Meramec	.09	.07																						.24	.36			.47					1.23
Morehouse	Mississippi	.53												.10				T.							.59	.33	.18	.19	T.			T.	2.17	
New Madrid <sup>2</sup>	do	.46	.06											.08											.24	.94			.61	.05				2.46
Owensville <sup>2</sup>	Gasconade	.42																							.75			.40					1.15	
Pacific <sup>2</sup>	Meramec	.42																						T.	.30			.10	T.				1.82	
Parma <sup>2</sup>	St. Francis	.48																							.50	T.		.13					2.11	
Poplar Bluff <sup>2</sup>	Black	.42	T.																						.42	.68			.70	T.				2.24
Richwoods <sup>2</sup>	Meramec	.35	.03																						.05	.82			.24					1.49
Rolla	do	.24	.02																						.86	.08		.08	.12	.03	.02	T.		1.63
St. Louis <sup>1</sup>	Mississippi	.15	T.																						.02	.78		.23	.21	.02	T.		.02	1.43
St. Louis Airport <sup>3</sup>	Missouri	.23	T.																						.01	.44	T.	.42	.12	.02	T.	T.	.01	1.25
St. Louis University <sup>3</sup>	Mississippi	.08	T.																						.01	.35		.34	.01	.02	.01		.02	0.84
Salem	Meramec	.26	.03																						.80			.35					.08	1.92
Skedon <sup>2</sup>	Mississippi	.43	.13	T.											T.					.04	T.	T.			.30	.85		T.	.44	T.	T.	T.		2.19
Union	Meramec	.26	.05																						.73	.13		.34		.04		.08		1.63
Valley Park <sup>2</sup>	do	.58	.02																						.08	.73		.31	T.	.03		T.		1.75
Van Buren	Black	.21																							*	.94		.45					.35	1.95
Wappapello Dam <sup>2</sup>	St. Francis	.38	T.																						.30	.68		.54	.02					1.92
Washington Univ. <sup>2</sup>	Mississippi	.57																							.08	.66		.29	.02	.02				1.64
West Plains	Black	.11																							.87	T.		.44	.01	T.			.15	1.58
Williamsville <sup>2</sup>	do	.40	.01																						.40	.67		T.	.70					2.20
Willow Sprgs (near) <sup>2</sup>	White	.34	T.																						.10	.40	T.					T.		0.88
Zalma (near) <sup>2</sup>	Mississippi	.60	T.																						.25	.67			.45					1.97
Cairo, Ill. <sup>1</sup>	do	.19	T.											.09											.94			.40	T.	T.	T.		.10	1.75

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation.

<sup>1</sup> First-order Weather Bureau station; precipitation is for the 24-hour period, midnight to midnight, unless otherwise indicated. <sup>2</sup> Precipitation is measured in the morning; amount then recorded is for the preceding 24 hours. <sup>3</sup> Precipitation is for 24-hour period, midnight to midnight. <sup>4</sup> Precipitation measured with recording gage. \* Included in next measurement. T. Trace, or precipitation less than 0.01 inch. † Estimated. ‡ Partially estimated. || Incomplete.

NOTE:—In addition to the stations shown on daily temperature page, records of daily temperatures are kept at the following stations in Missouri: Advance, Appleton City, Bethany, Bolivar, Boonville, Campbell, Canton Lock No. 20, Clifton Hill, Columbia Airport, Conception, Dean, Edgerton, Elsberry, Fulton, Goodland, Greenville, Kansas City University, Kidder, Kirksville Airport, Koshkonong, Lakeside, Licking (near), Lockwood, Marble Hill, Memphis, Mount Vernon, St. Joseph Airport, St. Louis Airport, St. Louis University, Saverton Lock No. 22, Seligman, Seymour (near), Springfield Airport, Steffenville, Tarkio, Versailles, Wappapello Dam, Warsaw, and Washington University.

## Daily Evaporation (inches), Mean Temperature (F°), and Wind Movement (miles) for December 1939

(See precipitation data in daily precipitation table)

Station	Data	Day of month																															Monthly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Columbia.....	Evaporation .....																																
	Mean temperature ..																																
	Wind movement ..																																
Lakeside .....	Evaporation .....	.126	****	.061	.061	.043	.064	.077	.054	.050	.064	.081	.107	.075	.073	.057	.076	.068	.037	.127	.075	.050	*	.074	.004								1.957
	Mean temperature ..	47	40	42	44	48	50	47	44	51	51	48	42	39	43	43	50	48	52	40	39	32	28	31	30	26	28	29	27	21	22	13	38.6
	Wind movement ..	53	140	105	36	23	46	31	35	28	38	24	65	88	52	51	49	31	11	89	118	61	39	47	60	38	41	31	81	111	52	99	1,768
St. Louis .....	Evaporation .....	.009	.009	.029	.024	.018	.043	.071	.091	.045	.068	.094	.052	.069	.037	.047	.045	.080	.038	.079	.064	.027	.034										1.512
	Mean temperature ..	47	38	36	37	44	48	47	42	53	53	42	48	33	39	42	53	52	54	42	31	28	28	28	28	24	26	29	22	22	20	8	36.9
	Wind movement ..	23	42	52	14	9	17	19	48	8	38	44	29	50	24	26	37	26	24	65	42	30	16	27	57	16	10	79	25	9	11	28	945

Observations taken at 8:00 a. m. except at 7:30 a. m. at Lakeside. For Columbia, Lakeside, and St. Louis (Washington University) descriptions see July 1938, April 1932, and August 1938 reports respectively. \* Included in next measurement. \*\*\*\* —.030.

## ERRATA

February 1939, page 7: Greatest precipitation in 24 hours at Lebanon should be 0.93.



## Daily Temperatures for December 1939

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
Northern Division																																		
Brunswick §§.....	Maximum...	60	45	46	55	62	67	61	54	65	65	60	61	44	49	59	60	69	68	48	41	34	35	34	37	38	32	30	31	26	27	14	47.6	
Chillicothe §§.....	Minimum...	43	36	30	28	29	32	33	26	25	36	30	30	27	25	26	36	31	29	37	24	18	18	18	23	20	20	24	24	18	9	3	26.1	
Columbia .....	Maximum...	55	45	46	57	61	70	59	58	65	64	60	56	48	48	60	63	69	66	57	49	48	41	32	35	36	29	31	30	35	26	14	48.8	
Fayette.....	Minimum...	43	34	28	28	31	31	33	23	23	35	29	31	23	24	24	36	30	35	36	23	15	15	11	21	22	14	22	23	16	9	1	24.8	
Grant City .....	Maximum...	51	46	45	55	61	68	61	57	71	65	61	55	43	53	59	66	65	71	46	39	31	34	34	34	35	32	31	20	26	27	13	47.4	
Hannibal .....	Minimum...	43	31	29	27	34	33	40	31	42	39	33	39	26	29	42	40	34	46	31	25	19	23	28	21	15	27	26	22	15	10	2	29.1	
Kansas City Airport.	Maximum...	52	50	45	56	62	66	60	54	67	64	58	55	45	51	59	61	61	64	69	61	48	43	34	39	32	34	41	33	28	27	4	47.7	
Kirksville .....	Minimum...	43	33	28	28	35	31	44	28	34	39	28	43	23	22	39	33	31	37	34	24	17	17	30	20	15	27	24	25	17	4	1	27.5	
Lawson .....	Maximum...	56	48	47	56	63	71	55	55	65	59	59	64	51	51	61	64	69	61	48	43	34	39	32	34	41	33	28	29	27	25	15	48.0	
Louisiana .....	Minimum...	41	30	25	25	32	28	40	24	33	36	30	42	20	21	28	29	30	37	26	21	13	14	28	19	22	20	16	9	5	2	24.8		
Louisiana .....	Maximum...	47	47	39	48	58	66	55	55	65	61	51	51	49	51	57	63	64	69	60	33	33	34	34	35	37	32	30	30	28	24	18	46.1	
Kansas City Airport.	Minimum...	40	31	22	22	33	31	43	26	37	43	29	43	22	20	37	40	36	45	36	26	16	16	28	22	18	26	25	16	6	2	27.5		
Kirksville .....	Maximum...	54	36	36	32	36	33	40	31	43	37	39	40	30	31	40	38	33	46	34	25	20	20	30	26	25	22	18	7	12	9	30.3		
Lawson .....	Minimum...	42	31	23	24	33	31	44	37	34	41	30	40	23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	25.0	
Lawson .....	Maximum...	54	51	48	54	58	70	60	56	63	63	62	55	48	48	58	62	68	63	53	40	35	35	32	31	33	30	26	27	24	28	18	46.9	
Louisiana .....	Minimum...	41	33	30	30	34	36	46	31	37	40	32	45	24	28	36	35	38	43	35	23	17	12	29	26	20	25	22	6	9	4	28.6		
Louisiana .....	Maximum...	50	42	50	48	60	65	67	49	67	70	65	50	40	50	60	60	65	70	45	40	35	30	35	40	38	35	33	30	30	22	13	46.9	
Macon §§.....	Minimum...	40	35	25	18	30	24	40	20	37	41	22	40	25	11	36	40	27	37	36	27	18	10	28	25	7	20	26	8	20	3	25.1		
Maryville .....	Maximum...	50	38	42	54	59	65	60	59	64	64	57	55	41	50	57	60	68	68	40	36	35	34	32	33	38	30	32	26	26	14	45.8		
Maryville .....	Minimum...	42	31	24	24	32	28	32	26	30	38	25	28	21	20	21	36	32	42	34	19	13	12	19	19	20	26	23	21	17	9	3	24.5	
Mexico §§.....	Maximum...	54	45	45	55	58	70	55	54	64	59	59	51	49	47	59	63	66	59	46	37	32	36	32	31	34	30	26	23	21	28	13	45.3	
Mexico §§.....	Minimum...	41	32	27	29	31	31	41	30	33	38	31	45	20	24	28	31	34	39	32	19	15	16	20	27	16	23	19	14	8	0	1	25.6	
Moberly .....	Maximum...	52	38	42	55	62	66	61	58	70	67	59	53	43	52	59	66	67	70	45	47	37	36	33	32	34	32	33	32	27	25	14	47.3	
Moberly .....	Minimum...	42	32	26	24	26	24	33	23	29	39	32	31	23	22	26	38	32	42	35	21	16	15	19	16	10	11	24	23	20	9	2	24.5	
Moberly .....	Maximum...	50	48	46	52	58	63	58	54	64	63	58	51	41	48	56	55	63	69	60	27	32	33	35	30	30	28	31	31	27	26	24	46.3	
Oregon .....	Minimum...	42	34	26	26	33	29	42	25	38	40	27	45	22	20	39	39	30	42	34	21	15	15	29	18	16	25	24	21	18	9	0	27.3	
St. Charles §§.....	Maximum...	55	46	47	57	54	72	64	57	65	60	63	58	50	47	62	67	69	60	50	42	34	37	32	31	39	30	28	23	22	29	15	47.0	
St. Charles §§.....	Minimum...	41	31	30	31	33	35	42	32	37	36	35	46	24	29	32	35	39	45	33	19	16	16	29	27	23	24	19	16	0	7	4	27.1	
St. Joseph .....	Maximum...	54	39	44	49	61	67	63	66	74	69	54	58	44	57	57	66	67	70	46	39	39	32	33	34	37	35	32	31	26	32	15	48.1	
St. Joseph .....	Minimum...	42	37	29	25	30	30	36	27	32	40	29	34	27	24	30	30	35	41	31	20	18	18	21	18	11	22	28	10	16	8	0	25.8	
Trenton .....	Maximum...	55	45	47	57	61	72	57	57	65	62	63	56	48	49	60	64	68	60	44	41	35	38	33	33	37	31	27	25	23	29	14	47.0	
Trenton .....	Minimum...	42	34	34	32	35	35	41	35	40	38	35	36	28	30	35	38	36	42	31	21	19	19	20	30	27	24	23	21	16	6	9	8	29.1
Unionville §§.....	Maximum...	52	50	40	56	63	69	60	56	66	62	57	56	46	49	61	63	68	65	55	53	40	46	39	38	34	31	30	26	20	18	49.2		
Unionville §§.....	Minimum...	40	33	27	28	30	29	45	24	34	38	27	30	23	24	34	36	29	34	35	25	25	15	16	30	28	22	24	15	7	1	26.5		
Warrenton .....	Maximum...	53	39	48	58	62	66	59	58	65	61	62	57	42	54	60	63	68	70	42	39	38	42	40	41	45	35	34	35	30	28	15	48.7	
Warrenton .....	Minimum...	41	31	23	22	29	31	32	28	29	35	27	28	20	18	22	36	38	33	34	23	15	16	20	21	24	23	20	7	8	1	24.2		
Warrenton .....	Maximum...	51	51	50	45	55	61	62	54	69	69	59	50	50	44	54	63	63	64	64	39	32	32	32	32	31	31	30	29	24	24	24	46.6	
Warrenton .....	Minimum...	41	33	26	28	34	34	48	30	38	47	30	43	25	25	38	42	40	42	37	23	17	18	30	18	15	26	24	18	11	2	29.0		
Keokuk, Iowa.....	Maximum...	50	45	37	51	55	63	55	56	64	57	51	51	36	48	55	62	60	68	44	34	32	39	36	38	42	32	29	30	26	24	2	44.6	
Keokuk, Iowa.....	Minimum...	44	29	23	24	33	33	36	27	40	36	30	32	21	24	39	41	39	44	31	24	18	18	32	27	25	25	23	18	15	6	2	27.6	
Southwestern Division																																		
Clinton .....	Maximum...	54	49	54	56	63	72	63	60	70	69	66	57	47	63	60	62	67	71	56	48	39	36	36	36	36	33	32	28	27	31	29	50.6	
Eldon §§.....	Minimum...	42	31	28	28	29	33	39	31	37	38	33	46	26	29	38																		







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U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

# CLIMATOLOGICAL DATA

19

## MISSOURI SECTION

W. J. MOXOM  
ST. LOUIS, MO.

VOL. XLIII

ANNUAL SUMMARY 1939

No. 13

PRICE: 5 CENTS A COPY; 25 CENTS A YEAR

### GENERAL SUMMARY

Details of weather conditions in Missouri during 1939 will be found in the monthly reports of Climatological Data, and only salient features will be mentioned briefly here.

The average temperature for the year, as a whole, was 57.4°, which is 1.0° lower than the 1938 average. However, there have been only three years since the beginning of records in 1888, when the yearly average for the State exceeded that for 1939; these were 1921, 1931, and 1938. The average for 1934 was the same as for 1939. April, August, and November were the only months during the year with average temperature below normal, and the deficiency during these months was not large. The February average was approximately normal. In the other eight months the temperature averages were well above the normal. January, with an average temperature of 39.0° was the third highest of record for that month, and the September average of 75.5° was the highest of record for that month.

During the first seven months of the year precipitation was fairly well distributed, and averaged somewhat above normal for the period. However, the latter part of August marked the beginning of a protracted period of dry weather which continued, with slight interruptions, during the remainder of the year. The greatest monthly deficiency was in September, when the total for the month averaged 0.81 inch, or 3.23 inches below normal. Precipitation during the last three months of year, while below normal, was helpful in restoring top soil moisture to some extent, but the year closed with the sub-soil moisture supply markedly deficient.

River stages during the last four months of the year were unusually low, and many springs and small streams became dry. In several localities the shortage of stock water became a serious problem. Pasturage was very poor and livestock went on dry feed unusually early in many sections, but the supply of feed and forage was generally plentiful.

### TEMPERATURE

The annual mean temperature for the State was 57.4°, or 2.3° above normal. The highest annual mean was 60.8° at Campbell, and the lowest annual mean was 53.1° at Memphis. The highest temperature recorded was 108° at Dean on September 2d, and at Conception and Garber on September 3d, and the lowest was 9° below zero at Conception on February 10th. The greatest daily range was 62° at Unionville on October 18th.

### PRECIPITATION

The average annual precipitation for the State was 38.25 inches, or 2.03 inches less than normal. The greatest annual amount was 52.93 inches at Dexter, and the least annual amount was 24.01 inches at Concordia. The greatest local monthly amount was 13.09 inches at Moberly in June, and the least local monthly amount was 0.12 inch at Steffenville in September. The greatest amount in any twenty-four hours was 6.18 inches at Salem on August 12-13th. The average number of days with 0.01 inch or more was 93, or four days more than normal.

The snowfall averaged 23.3 inches, or 5.5 inches more than normal. The greatest annual snowfall was 39.4 inches at

Warrensburg, and the least annual amount was 5.7 inches at Bragg City. The greatest monthly snowfall was 19.0 inches at Warrensburg in February.

### CONDENSED STATE SUMMARY FOR 1939

Month	Temperature				Precipitation				
	Mean	Departure from Normal	Maximum	Minimum	Mean	Departure from Normal	Greatest	Least	No. Days with .01 or more
January.....	39.0	+ 8.0	74	- 5	2.74	+0.33	5.95	0.71	9
February.....	33.0	- 0.1	71	- 9	3.17	+1.08	10.09	0.71	9
March.....	47.1	+ 3.1	89	- 4	3.08	-0.18	6.04	1.11	8
April.....	53.4	+ 1.8	83	16	5.01	+1.08	8.21	2.22	10
May.....	67.4	+ 2.9	102	31	4.17	-0.60	11.58	0.76	9
June.....	74.6	+ 2.0	99	41	5.64	+1.00	13.09	1.15	12
July.....	80.0	+ 2.0	107	51	2.91	-0.76	9.38	0.26	6
August.....	75.4	- 1.1	106	45	4.80	+1.00	13.04	1.26	9
September.....	75.5	+ 6.1	108	30	0.81	-3.23	3.65	0.12	2
October.....	61.1	+ 3.6	100	19	1.89	-0.97	6.98	0.13	6
November.....	43.5	- 0.9	78	12	2.58	-0.09	4.87	0.85	7
December.....	38.8	+ 4.6	80	- 5	1.45	-0.69	2.61	0.48	6
Year.....	57.4	+ 2.3	108	- 9	38.25	-2.03	13.09	0.12	93

### COMPARATIVE ANNUAL DATA FOR MISSOURI

Year	Temperature			Precipitation					Number of days				
	Average for State	Highest	Lowest	Average for State	Average Northern Division	Average Southwestern Division	Average Southeastern Division	Snowfall, Average for State	Precip. .01 in. or more	Clear	Partly cloudy	Cloudy	
1888.....	52.9	111	-32	40.40	39.67	41.36	40.17	.....	81	.....	.....	.....	
1889.....	54.3	107	- 9	38.19	36.97	40.35	37.26	.....	85	.....	.....	.....	
1890.....	54.7	110	-19	39.51	31.07	42.08	45.39	.....	82	.....	.....	.....	
1891.....	53.9	104	-13	37.18	37.28	37.71	36.54	.....	93	.....	.....	.....	
1892.....	52.8	102	-31	44.77	41.62	47.88	44.80	.....	92	141	95	130	
1893.....	52.7	107	-20	39.17	35.42	38.99	43.10	.....	77	155	117	93	
1894.....	55.1	111	-35	34.61	26.97	38.27	38.58	15.4	73	170	120	75	
1895.....	52.9	106	-26	40.03	36.74	43.42	39.92	23.7	85	161	108	96	
1896.....	55.5	108	-10	40.37	39.65	39.79	41.68	12.6	86	154	111	101	
1897.....	55.0	108	-16	40.56	35.18	37.46	49.03	19.5	86	167	104	94	
1898.....	54.4	104	-20	54.26	51.87	54.12	56.80	18.6	102	162	102	101	
1899.....	54.0	108	-32	37.93	36.84	36.81	40.64	28.8	82	166	110	89	
1900.....	55.6	105	-16	39.00	35.73	39.57	41.70	18.5	90	171	106	88	
1901.....	55.5	116	-29	25.86	23.36	26.56	27.66	19.2	72	190	98	77	
1902.....	54.1	103	-17	45.01	42.71	48.98	43.33	16.7	103	159	103	103	
1903.....	53.6	102	-25	40.63	38.78	42.79	40.31	16.5	96	170	96	99	
1904.....	53.2	100	-23	42.06	41.59	42.43	42.16	18.8	89	180	99	87	
1905.....	53.6	103	-40	47.00	39.82	51.84	49.35	22.3	97	174	91	100	
1906.....	55.0	101	-13	35.43	30.26	38.78	49.25	28.2	98	165	89	111	
1907.....	55.4	109	-15	40.91	37.01	41.92	43.81	12.8	95	173	82	110	
1908.....	56.8	102	-10	43.81	37.66	47.24	46.54	9.7	91	184	92	90	
1909.....	55.8	110	-20	45.27	44.94	42.95	47.32	18.3	92	173	90	102	
1910.....	54.6	109	-24	37.81	31.96	37.99	43.48	17.2	82	183	81	101	
1911.....	56.7	113	-19	37.43	38.04	37.92	36.33	15.2	88	166	86	113	
1912.....	53.5	105	-36	38.99	32.53	38.82	45.62	36.0	81	192	80	94	
1913.....	56.5	110	-12	38.20	33.14	35.96	45.50	29.6	87	174	80	111	
1914.....	56.1	109	-18	31.68	32.21	36.43	35.41	26.4	81	171	86	108	
1915.....	55.0	102	-24	49.84	48.57	51.74	49.22	25.3	98	160	86	119	
1916.....	55.3	109	-29	40.62	38.58	41.08	42.12	18.2	87	191	77	98	
1917.....	52.6	107	-23	32.21	28.70	31.92	36.01	13.9	80	186	83	96	
1918.....	55.4	111	-25	37.69	32.60	37.19	43.29	27.2	84	185	80	100	
1919.....	55.3	106	-23	40.27	36.73	40.46	43.62	10.2	86	181	81	103	
1920.....	54.3	105	-10	37.56	33.62	38.66	40.40	15.4	89	171	82	113	
1921.....	58.2	109	- 8	44.70	39.16	45.40	48.54	11.1	92	173	93	99	
1922.....	56.8	108	- 6	39.68	37.50	41.64	39.90	8.2	85	192	80	93	
1923.....	55.3	108	-11	42.18	33.43	42.47	50.64	8.6	98	165	88	112	
1924.....	53.0	106	-28	40.03	35.28	44.39	40.41	28.3	92	173	91	102	
1925.....	55.6	110	-15	39.15	38.83	36.81	41.82	16.4	84	171	94	100	
1926.....	54.5	108	-20	42.92	42.35	43.85	42.57	23.2	95	160	86	119	
1927.....	55.6	102	-24	55.53	42.03	59.85	61.70	13.4	101	163	91	111	
1928.....	55.2	102	-18	45.88	41.22	46.01	50.40	6.8	90	174	94	98	
1929.....	53.5	105	-23	46.72	44.13	45.56	50.48	22.3	102	155	93	117	
1930.....	55.9	114	-31	31.38	26.71	34.90	32.53	17.6	75	194	84	87	
1931.....	58.0	110	- 5	40.31	41.10	38.85	40.97	14.2	93	175	82	108	
1932.....	55.6	109	-21	38.24	35.88	36.71	42.09	16.0	85	178	93	95	
1933.....	57.3	108	-22	37.62	29.65	37.05	46.16	8.0	86	175	95	95	
1934.....	57.4	117	-26	35.08	30.66	34.92	39.66	23.0	82	187	89	89	
1935.....	55.0	110	-12	48.04	42.93	49.12	52.66	5.0	106	144	89	122	
1936.....	56.3	118	-25	29.42	26.48	30.03	31.73	15.8	73	196	86	84	
1937.....	54.5	105	-15	37.30	29.85	36.16	45.89	15.3	93	160	96	109	
1938.....	58.4	110	- 9	41.00	36.86	42.36	43.83	10.0	92	182	90	93	
1939.....	57.4	108	- 9	38.25	36.16	35.92	42.68	23.3	93	181	96	88	
Period.....	55.1	118	-40	40.28	36.48	41.01	43.36	17.8	89	172	82	101	



## Climatological Data for Year 1939

Stations	Counties	Elevation, feet	Temperature (Degrees Fahrenheit)						Precipitation (inches)						Number of days						Prevailing direction of wind
			Length of record, years	Annual mean	Highest	Date	Lowest	Date	Length of record, years	Total	Greatest monthly	Month	Least monthly	Month	Total snowfall	With precip. .01 inch or more	Clear	Partly cloudy	Cloudy		
Northern Division																					
Bethany	Harrison	916	45	54.7	105	Sept. 3	- 5	Feb. 10	47	30.42	9.44	June	0.38	Sept.	20.3	69	214	86	65	n.w.	
Brunswick	Chariton	652	59	55.9	104	Sept. 3	- 1	Feb. 10†	61	32.89	8.64	June	0.50	Sept.	17.4	93	205	61	99	n.w.	
Canton, Lock & Dam 20	Lewis	488	2	55.4	102	July 6	- 3	Dec. 31	10	35.24	6.38	Aug.	0.20	Sept.	11.9	96	173	75	117	s.	
Chillicothe	Livingston	779	31	55.4	105	Sept. 3	- 4	Feb. 10	34	34.51	11.36	June	0.40	Sept.	24.5	60	229	65	71	se.	
Clifton Hill	Randolph	731	41	55.3	102	July 17	- 3	Feb. 21	31	36.04	8.10	June	0.30	Sept.	25.9	104	179	96	90	sw.	
Columbia	Boone	740	50	57.3	103	Sept. 3	- 2	Feb. 21	50	37.52	8.71	Aug.	0.58	Sept.	22.7	101	118	132	115	s.	
Conception	Nodaway	980	51	55.8	108	Sept. 3	- 9	Feb. 10	56	28.69	8.96	June	0.19	Oct.	22.7	76	156*	135*	71*	n.w.	
Edgerton	Platte	856	20	56.4	107	Sept. 3	- 4	Feb. 21†	29	31.80	11.11	June	0.26	July	20.2	81	235 <sup>b</sup>	35 <sup>b</sup>	89 <sup>b</sup>	s.	
Elberry	Lincoln	449	9	55.9	102	July 13	- 4	Feb. 23†	9	33.31	5.52	April	0.40	Sept.	20.5	87	153	143	69	n.w.	
Fayette	Howard	760	60	56.7	101	Sept. 3	- 0	Feb. 10†	57	36.75	10.17	June	0.29	Sept.	19.6	94	192 <sup>b</sup>	77 <sup>b</sup>	94 <sup>b</sup>	n.w.	
Fulton	Callaway	818	52	55.8	105	July 13†	- 5	Dec. 31	48	39.58	7.10	Aug.	0.37	Sept.	24.3	97	201	82	82	s.	
Grant City	Worth	1,134	36	54.5	103	Sept. 3†	- 8	Feb. 10	48	32.62	9.88	June	0.29	Oct.	25.3	71	142	145	78	se.	
Hannibal	Marion	759	48	55.0	97	July 7†	- 2	Dec. 31	56	39.83	9.17	Aug.	0.23	Sept.	24.3	98	143	86	136	sw.	
Kansas City Airport	Jackson	741	51	58.1	107	Sept. 3	- 1	Feb. 10	51	34.72	10.99	June	0.54	Sept.	16.4	95	141	103	121	sw.	
Kansas City University	Jackson	908	2	58.6	107	Sept. 3	- 0	Feb. 10	2	32.95	9.93	June	0.58	Sept.	16.2	89	165	120	80	sw.	
Kidder	Caldwell	1,020	48	55.9	105	Sept. 3	- 1	Feb. 21	52	33.68	8.53	June	0.57	Sept.	30.7	91	246	29	90	sw.	
King City	Gentry	1,095	...	...	...	...	...	...	14	26.81	6.92	June	0.36	Sept.	25.2	71	127	154	84	sw.	
Kirksville	Adair	969	51	54.5	100	Sept. 3†	- 5	Feb. 10	58	34.97	7.53	June	0.23	Sept.	29.9	88	156	141	63*	n.w.	
Lawson	Ray	1,070	2	56.3	105	Sept. 3	- 3	Feb. 10†	2	31.92	9.72	June	0.41	Sept.	28.9	91	202	92	71	n.w.	
Linneus	Linn	816	...	...	...	...	...	...	8	37.45	9.60	June	0.41	Sept.	18.7	91	202	92	71	n.w.	
Louisiana	Pike	469	46	54.8	100	July 7†	- 3	Dec. 30†	59	37.97	6.41	Aug.	0.17	Sept.	27.2	86	206	94	65	w.	
Macon	Macon	875	41	54.2	100	July 13†	- 3	Feb. 10†	47	42.21	9.34	Aug.	0.27	Sept.	21.3	88	187	95	83	n.w.	
Maryville	Nodaway	1,169	50	54.7	107	Sept. 3	- 8	Feb. 10	46	26.47	7.74	June	0.31	Oct.	24.3	79	181	60	124	n.w.	
Memphis	Scotland	787	1	53.1	100	Sept. 7†	- 4	Dec. 31	10	34.91	7.09	June	0.30	Sept.	16.4	84	164	68	133	sw.	
Mexico	Audrain	800	51	55.6	104	Sept. 3	- 2	Dec. 31	62	47.13	9.65	Aug.	0.37	Sept.	29.3	104	...	...	...	sw.	
Moberly	Randolph	875	3	55.7	100	July 7†	- 1	Feb. 10†	3	41.59	13.09	June	0.25	Sept.	14.5	92	202	91	72	s.	
Oregon	Holt	1,048	84	56.9	106	Sept. 3	- 6	Feb. 10	84	24.80	7.19	June	0.13	Oct.	28.5	71	224	94	47	n.w.	
St. Charles	St. Charles	520	52	57.7	105	July 7	- 0	Dec. 31	62	36.36	8.56	Aug.	1.03	Sept.	30.1	100	219*	81*	64*	sw.	
St. Joseph	Buchanan	957	30	56.9	106	Sept. 3	- 4	Feb. 10	68	26.67	7.52	June	0.42	Sept.	18.4	91	167	110	88	s.	
Steffenville	Lewis	650	42	55.4	100	July 13	- 4	Dec. 31	47	40.14	9.30	Aug.	0.12	Sept.	26.0	91	161	128	76	sw.	
Tarkio	Atchison	916	37	54.1	105	Sept. 6†	- 8	Feb. 10	46	26.61	6.81	June	0.48	Dec.	32.0	71	161	128	76	sw.	
Trenton	Grundy	822	44	56.3	106	Sept. 7	- 4	Feb. 10	45	37.59	10.35	June	0.35	Sept.	21.8	86	190	112	63	s.	
Unionville	Putnam	1,062	47	54.9	106	Sept. 3†	- 6	Feb. 10	47	33.05	8.03	June	0.30	Sept.	23.0	68	228	49	88	sw.	
Warrenton	Warren	816	58	57.1	98	July 6†	- 2	Dec. 31	50	47.47	8.09	June	0.51	Sept.	35.5	104	121*	150*	93*	sw.	
Keokuk, Iowa	Lee, Iowa	574	68	55.1	100	Sept. 15	- 2	Dec. 31	68	33.07	5.80	May	0.23	Sept.	10.5	105	130	97	138	sw.	
Division means and extremes		.....	..	55.8	108	Sept. 3	- 9	Feb. 10	..	36.16	13.09	June	0.12	Sept.	23.9	88	177	101	87	sw.	
Southwestern Division																					
Appleton City	St. Clair	813	45	57.9	107	July 13†	- 4	Feb. 21	48	27.23	4.88	Aug.	0.24	Sept.	20.0	86	220	42	103	sw.	
Bolivar	Polk	1,071	37	59.0	105	Sept. 3	- 1	Feb. 21†	45	37.30	7.58	May	0.63	Sept.	20.1	108	155 <sup>a</sup>	114 <sup>a</sup>	92 <sup>a</sup>	sw.	
Boonville	Cooper	650	2	56.1	102	July 7†	- 1	Feb. 10†	63	37.34	9.97	Aug.	0.34	Sept.	21.4	84	197	56	112	se.	
Clinton	Henry	786	47	58.1	106	Sept. 3	- 4	Feb. 21	53	28.97	5.64	June	0.17	Sept.	19.6	104	...	...	...	sw.	
Dean	McDonald	1,000	36	59.0	108	Sept. 2	- 4	Feb. 21	41	46.06	11.58	May	0.85	July	8.5	81	201*	79*	82*	w.	
Eldon	Miller	934	45	56.7	106	Sept. 3	- 2	Dec. 31	41	38.42	6.20	June	1.18	Sept.	25.2	99	130*	114*	101*	sw.	
Garber	Taney	950	6	58.5	108	Sept. 3	- 4	Dec. 29	6	48.61	9.55	May	1.44	Sept.	15.3	96	142	79	144	e.	
Harrisonville	Cass	904	62	56.6	105	Sept. 3	- 6	Feb. 21†	65	32.55	7.88	June	0.51	Oct.	24.5	88	155	77	133	sw.	
Jefferson City	Cole	557	50	56.0	107	Sept. 3	- 0	Dec. 31	58	35.15	5.81	April	0.66	Sept.	31.2	94	203	80	82	s.	
Lakeside	Miller	595	9	57.4	105	Sept. 3	- 6	Feb. 21†	9	34.60	5.20	June	0.32	Sept.	...	97	...	...	...	sw.	
Lamar	Barton	980	52	58.6	106	July 15	- 0	Dec. 29	59	34.06	7.97	May	1.03	Sept.	25.0	100	156*	108*	100*	sw.	
Lebanon	Laclede	1,265	52	57.9	102	July 15	- 4	Dec. 29	53	41.20	6.47	May	1.08	Dec.	25.5	100	217	92	56	sw.	
Lexington	Lafayette	688	55	57.3	105	July 16	- 1	Feb. 10†	56	32.97	6.78	June	0.64	Oct.	25.5	100	217	92	56	sw.	
Lockwood	Dade	1,078	34	59.3	105	Sept. 3	- 0	Feb. 21	44	39.17	8.23	May	0.55	Sept.	27.0	85	223	83	59	sw.	
Marshall	Saline	779	53	57.8	103	Sept. 3	- 0	Feb. 10†	50	31.99	7.93	Aug.	0.35	Sept.	27.0	85	223	83	59	sw.	
Mountain Grove	Wright	1,463	39	58.3	100	Sept. 8†	- 8	Feb. 21†	43	40.59	6.27	April	0.76	Sept.	28.7	103	131	176	58	sw.	
Mount Vernon	Lawrence	1,174	28	59.1	106	Sept. 3	- 3	Feb. 21†	46	43.03	9.85	May	0.93	Sept.	24.2	82	98	221	46	sw.	
Neosho	Newton	1,011	53	59.8	105	Sept. 3	- 4	Feb. 21†	57	36.54	8.76	May	0.40	Sept.	11.7	85	221*	52*	91*	sw.	
Nevada	Vernon	862	47	59.8	107	Sept. 3	- 3	Feb. 21	48	31.88	5.56	May	1.08	Sept.	20.7	88	221*	52*	91*	sw.	
Sedalia	Pettis	910	27	59.2	107	Sept. 3	- 4	Feb. 21	29	33.12	7.39	April	0.41	July	22.4	101	212	76	77	sw.	
Seligman	Barry	1,542	39	59.4	100	Sept. 3	- 3	Feb. 21	37	46.07	10.49	May	0.40	Sept.	19.0	72	198*	81*	66*	sw.	
Seymour (near)	Webster	1,642	34	56.9	100	Sept. 3	- 2	Dec. 29	34	38.10	7.47	May	0.35	Sept.	24.8	92	176	95	94	se.	
Springfield	Greene	1,301	52	58.5	102	Sept. 3	- 4	Feb. 21	52	36.25	6.64	May	0.70	Sept.	26.5	101	151	109	105	s.	
Versailles	Morgan	1,637	13	58.2	105	Sept. 3	- 0	Feb. 21†	16	36.70	5.76	May	0.66	Sept.	21.0	103	194*	80*	90*	sw.	
Warrensburg																					



Monthly and Annual Mean Temperatures for the Year 1939, with Departures from Normal

Stations	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure
Northern Division																										
Bethany	34.4	+ 9.6	27.3	- 0.2	41.2	+ 0.9	51.0	- 0.5	67.4	+ 4.9	73.4	+ 1.4	78.8	+ 2.5	72.9	- 2.1	73.2	+ 6.1	59.0	+ 4.2	42.1	- 0.7	36.0	+ 5.9	54.7	+ 2.7
Brunswick	36.2	+ 9.5	28.1	- 1.7	44.0	+ 2.1	52.0	- 2.2	67.8	+ 3.6	74.7	+ 1.7	80.8	+ 4.8	74.8	+ 0.6	74.3	+ 7.3	59.4	+ 4.1	41.8	+ 0.2	36.8	+ 6.2	55.9	+ 3.0
Canton, Lock & Dam No. 20	35.0	.....	29.8	.....	43.7	.....	50.6	.....	66.6	.....	75.2	.....	78.8	.....	74.2	.....	73.1	.....	59.0	.....	41.7	.....	37.2	.....	55.4	.....
Chillicothe	34.9	+10.5	26.2	- 5.5	43.0	+ 1.3	51.7	- 0.3	68.2	+ 5.3	74.4	+ 2.1	80.1	+ 3.1	73.6	- 1.9	73.6	+ 6.1	59.8	+ 4.8	42.0	- 0.7	36.8	+ 6.9	55.4	+ 2.8
Clifton Hill	36.8	+ 8.7	30.9	+ 0.7	45.0	+ 2.8	51.6	- 1.9	66.6	+ 3.0	72.8	+ 0.4	79.0	+ 2.6	73.0	- 3.0	72.3	+ 3.7	59.4	+ 2.7	40.6	- 2.8	35.4	+ 4.4	55.3	+ 1.8
Columbia	39.4	+ 8.5	31.6	- 0.8	46.4	+ 3.5	53.2	- 1.6	68.1	+ 3.1	75.0	+ 1.6	80.8	+ 3.5	75.4	- 0.9	75.4	+ 6.0	61.1	+ 5.2	43.5	- 0.6	38.2	+ 7.0	55.8	+ 2.5
Conception	34.3	+ 9.6	27.0	- 1.2	41.4	+ 1.6	52.1 <sup>a</sup>	- 0.1	69.5	+ 7.4	74.1	+ 2.6	81.0	+ 4.4	75.2	+ 0.5	75.4	+ 8.2	60.6	+ 5.2	43.8	- 1.8	36.2	+ 7.0	55.8	+ 3.9
Edgerton	36.2	+ 9.3	29.6	- 4.7	43.0 <sup>b</sup>	- 0.2	53.2 <sup>2</sup>	- 0.6	68.1 <sup>1</sup>	+ 5.1	74.0	+ 2.1	81.5 <sup>1</sup>	+ 5.4	74.8 <sup>1</sup>	- 0.3	75.2	+ 7.3	60.4 <sup>1</sup>	+ 4.1	42.7	- 0.9	37.8	+ 7.4	56.4	+ 3.0
Elsberry	37.1	.....	32.4	.....	46.2 <sup>a</sup>	.....	51.9	.....	67.6	.....	74.0	.....	78.2	.....	73.4	.....	73.0	.....	59.0	.....	42.4	.....	36.0	.....	55.9	.....
Fayette	39.0	+12.0	31.9	+ 1.3	47.0	+ 5.1	52.8	- 1.4	67.2	+ 3.4	74.2 <sup>b</sup>	+ 1.4	79.7	+ 2.5	74.2	- 1.7	73.8	+ 5.7	60.3	+ 3.9	42.4	- 0.2	37.6	+ 6.5	56.7	+ 3.2
Fulton	36.8	+ 7.3	29.5	- 3.6	45.2	+ 1.1	52.0	- 2.6	66.8	+ 2.2	74.2	+ 1.0	79.6	+ 1.9	74.4	- 2.0	73.8	+ 4.9	60.2	+ 2.8	41.6	- 2.6	35.6	+ 2.1	55.8	+ 1.0
Grant City	32.4 <sup>c</sup>	+ 7.6	26.4	- 2.2	40.9	+ 0.4	52.2	- 0.6	68.2	+ 6.2	72.9	+ 2.1	77.4	+ 2.2	72.8	- 2.1	72.6	+ 5.6	55.6	+ 3.5	42.4	- 0.5	36.4	+ 8.4	54.5	+ 2.6
Hannibal	35.1	+ 8.3	30.6	+ 0.9	44.8	+ 3.8	50.8	- 2.6	66.6	+ 3.0	73.0	+ 0.5	77.6	+ 0.8	72.6	- 2.4	71.6	+ 3.9	58.3	+ 2.3	41.3	- 0.8	36.8	+ 3.5	55.0	+ 1.9
Kansas City	38.5	+10.3	29.4	- 1.8	45.9	+ 3.2	53.9	- 0.9	70.1	+ 5.3	76.0	+ 2.4	84.7	+ 6.6	77.7	+ 0.4	76.7	+ 7.8	62.1	+ 4.4	43.8	- 0.1	39.4	+ 6.9	58.1	+ 3.7
Kansas City University	39.0	.....	32.4	.....	47.8	.....	55.0	.....	70.2	.....	75.7	.....	83.5	.....	76.1	.....	77.0	.....	62.4	.....	45.4	.....	39.0	.....	58.6	.....
Kidder	35.8	+ 9.8	28.8	- 0.4	43.2	+ 2.4	51.9	- 0.3	67.8	+ 5.2	74.4	+ 2.6	80.0	+ 3.7	74.4	- 1.3	74.0	+ 6.7	60.2	+ 4.1	42.3	- 1.0	37.4	+ 8.2	55.9	+ 3.6
Kirkville	34.4	+ 9.6	28.3	- 1.2	42.4	+ 2.7	50.7	- 1.2	66.4	+ 4.1	73.2	+ 1.5	78.0 <sup>b</sup>	+ 2.0	72.0	- 1.3	72.4	+ 6.1	58.6	+ 3.9	42.0	- 1.4	35.6 <sup>b</sup>	+ 6.0	54.5	+ 2.9
Lawson	37.1	.....	32.5	.....	44.4	.....	51.8	.....	67.4	.....	73.4	.....	80.4	.....	74.6	.....	74.5	.....	60.9	.....	43.4	.....	37.8	.....	56.3	.....
Louisiana	35.0	+ 6.9	30.2	- 0.7	45.2	+ 1.7	50.4	- 3.6	65.6	+ 1.9	73.1	+ 1.0	77.2	+ 1.2	72.2	- 2.7	72.2	+ 4.2	58.6	+ 2.4	41.2	- 2.9	36.0	+ 4.2	54.8	+ 1.1
Macon	34.6	+ 7.1	26.2	- 3.4	42.0	- 0.2	50.2	- 2.9	66.6	+ 3.1	73.2	+ 0.8	78.4	+ 1.2	72.8	- 3.3	71.4	+ 3.5	58.1	+ 1.8	41.6	- 2.3	35.2	+ 5.1	54.2	+ 1.0
Maryville	33.6	+10.7	25.8	- 0.0	40.9	+ 3.0	51.8	- 1.0	68.4	+ 7.1	73.0	+ 3.2	79.8	+ 4.1	74.2	+ 0.4	74.0	+ 8.4	58.5	+ 5.0	41.4	- 2.0	35.4	+ 8.6	54.7	+ 4.5
Memphis	32.6 <sup>c</sup>	.....	24.2	.....	39.2	.....	49.0	.....	66.7	.....	73.4	.....	79.0	.....	73.0	.....	71.5	.....	55.6	.....	39.5	.....	33.2	.....	53.1	.....
Mexico	36.6	+ 8.6	29.0	- 1.1	43.9	+ 1.9	51.8	- 2.0	67.6	+ 3.6	74.2	+ 1.0	79.2	+ 1.9	74.1	- 1.9	73.4	+ 4.9	59.6	+ 3.3	41.8	- 1.1	35.9	+ 4.1	55.6	+ 1.9
Moberly	36.7	.....	30.1	.....	44.4	.....	51.8	.....	67.4	.....	73.8	.....	79.2	.....	73.0	.....	73.7 <sup>a</sup>	.....	59.8	.....	41.6	.....	36.8	.....	55.7	.....
Oregon	36.3	+12.2	28.1	- 0.7	43.6	+ 4.0	53.4	- 0.7	68.9	+ 6.6	75.1	+ 2.9	82.0	+ 6.4	76.0	+ 0.8	75.8	+ 8.7	61.0	+ 5.9	44.4	- 3.9	37.4	+ 8.7	56.9	+ 5.0
St. Charles	38.5	+ 7.5	32.2	- 1.1	47.4 <sup>a</sup>	+ 2.9	55.2	- 2.4	69.0	+ 5.9	76.4	+ 2.5	80.7	+ 2.6	76.4	- 0.4	76.5	+ 8.2	62.2	+ 4.0	43.2	- 1.2	37.0	+ 2.1	56.7	+ 2.5
St. Joseph	36.8	+11.3	27.0	- 2.6	43.8	+ 3.3	53.4	- 1.0	70.0	+ 5.8	75.1	+ 1.4	82.7	+ 5.3	76.2	- 0.3	75.6	+ 7.2	60.0	+ 4.0	44.4	- 2.9	38.0	+ 8.4	56.9	+ 3.9
Steffenville	35.0	+ 8.6	30.3	- 0.6	44.1	+ 1.9	51.0	- 2.1	66.9	+ 3.1	73.4	+ 0.8	78.3	+ 0.5	73.0	- 3.5	72.4	+ 3.4	59.4	+ 2.0	42.9	- 0.6	36.8	+ 2.6	55.4	+ 1.7
Tarkio	32.8	+ 9.9	23.8	- 5.2	40.6	+ 0.5	52.0	- 2.0	69.1	+ 6.5	72.6	+ 0.8	79.4	+ 2.6	74.2	- 1.0	72.3	+ 6.0	56.7	+ 1.9	40.8	- 0.7	34.6	+ 8.2	54.1	+ 2.6
Treuton	36.4	+10.1	28.8	- 0.6	43.3	+ 2.2	52.3	- 0.4	68.5	+ 5.0	74.4	+ 2.2	80.6	+ 4.0	74.2	- 1.0	73.6	+ 6.4	61.2	+ 5.3	43.8	- 1.6	37.4	+ 8.2	56.3	+ 2.6
Unionville	33.8	+10.3	24.9	- 1.8	40.8	+ 1.9	50.8	- 0.2	68.9	+ 6.8	74.6	+ 3.3	79.6	+ 3.1	74.1	- 1.0	73.6	+ 6.5	58.8	+ 3.6	42.0	- 1.7	36.4	+ 8.5	54.9	+ 3.6
Warrenton	39.5	+10.3	33.8	- 2.9	48.1	+ 5.6	53.5	- 1.3	68.0	+ 3.1	74.6	+ 1.2	79.0	+ 1.2	73.8	- 2.7	74.2	+ 5.2	60.0 <sup>a</sup>	+ 4.0	42.7	- 1.7	36.4	+ 8.5	54.9	+ 3.6
Keokuk, Iowa	35.2	+10.3	28.1	- 0.2	42.4	+ 3.5	50.4	- 1.9	67.4	+ 3.6	74.0	+ 1.5	78.0	+ 1.9	74.0	- 1.0	73.1	+ 5.6	58.6	+ 3.2	45.0	- 1.9	36.1	+ 6.5	55.1	+ 2.9
Division means	36.0	+ 9.4	28.8	- 1.2	43.8	+ 2.3	51.9	- 1.2	68.0	+ 4.6	74.1	+ 1.7	79.9	+ 3.0	74.1	- 1.3	73.8	+ 6.0	59.6	+ 3.8	42.4	- 0.9	36.7	+ 6.3	55.8	+ 2.8
Southwestern Division																										
Appleton City	39.2	+ 7.9	33.5	- 0.4	47.1	+ 2.0	52.7	- 3.4	66.4	+ 1.4	75.2	+ 0.8	82.0	+ 3.8	77.3	- 0.5	75.8	+ 5.4	62.4	+ 3.5	43.6	- 2.4	39.3	+ 4.7	57.9	+ 1.9
Bolivar	40.1 <sup>b</sup>	+ 6.5	35.8	+ 0.6	49.2	+ 2.9	54.0	- 2.3	66.8	+ 2.0	74.6	+ 1.8	80.6	+ 3.3	76.7	- 0.3	78.2	+ 8.3	63.8	+ 5.2	44.8	- 2.0	42.6 <sup>b</sup>	+ 7.0	60.9	+ 2.8
Boonville	36.7	.....	28.4	.....	44.8	.....	52.0	.....	67.2	.....	74.2	.....	80.7	.....	74.7	.....	74.8	.....	60.8	.....	42.4	.....	36.5	.....	56.1	.....
Clinton	39.2	+ 7.5	33.4	- 0.2	47.8	+ 2.8	53.9	- 2.4	67.6	+ 2.1	75.0	+ 1.2	82.2	+ 3.9	76.6	- 0.8	76.6	+ 5.8	62.0	+ 3.1	43.3	- 3.7	39.4	+ 4.7	58.1	+ 2.0
Dean	42.2	+ 6.3	36.5	+ 0.8	51.6	+ 2.8	54.7	- 2.0	65.8	+ 1.0	73.6	+ 0.9	79.2	+ 1.9	77.2	- 0.5	77.2	+ 6.2	62.8 <sup>c</sup>	+ 4.1	45.0	- 4.3	41.8	+ 4.3	59.0	+ 1.7
Eldon	39.0 <sup>b</sup>	+ 7.9	30.1 <sup>a</sup>	- 3.0	45.6	+ 2.0	51.8	- 3.6	66.4 <sup>a</sup>	+ 2.2	74.2	+ 1.2	80.4 <sup>b</sup>	+ 3.2	75.4 <sup>b</sup>	- 1.0	76.0	+ 6.6	60.8	+ 3.4	42.4 <sup>b</sup>	- 2.4	38.2	+ 3.9	56.7	+ 1.7
Garber	41.2	.....	36.8	.....	50.1	.....	55.4	.....	65.4	.....	74.2	.....	79.0	.....	76.4	.....	76.6	.....	61.6	.....	44.2	.....	40.7	.....	58.5	.....
Harrisouville	37.3	+10.0	28.0	- 2.7	44.2	+ 2.9	51.3	- 2.6	67.1	+ 3.3	74.0	+ 0.9	82.6	+ 4.9	75.7	- 0.2	75.									



## Monthly and Annual Precipitation for the Year 1939, with Departures from Normal

Stations	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure
Northern Division																										
Amity	0.71	.....	1.56	.....	4.41	.....	3.63	.....	0.93	.....	8.11	.....	1.92	.....	4.12	.....	0.49	.....	1.78	.....	2.11	.....	1.18	.....	30.95	.....
Bethany	1.07	-0.12	0.98	-0.44	2.32	+0.09	3.39	+0.10	1.01	-3.16	9.44	+4.32	2.95	-1.21	4.71	+0.89	0.38	-4.18	1.45	-1.47	1.95	-0.69	0.77	-0.38	30.42	-5.59
Bowling Green	1.47	.....	2.44	.....	2.74	.....	5.20	.....	1.84	.....	5.34	.....	3.95	.....	6.40	.....	0.17	.....	1.84	.....	2.57	.....	0.98	.....	34.94	.....
Brunswick	1.13	-0.46	1.26	-0.55	3.27	+0.57	3.66	-0.17	3.05	-1.56	8.64	+3.53	1.55	-2.56	5.24	+1.30	0.50	-4.31	1.17	-1.83	2.19	0.60	1.23	-0.44	32.89	-6.48
Canton, Look and Dam 20	1.22	-0.72	1.41	+0.15	4.31	+1.97	4.44	+1.88	5.01	-0.31	5.40	+0.62	2.66	+0.38	6.38	+3.22	0.20	-3.54	1.88	-0.38	1.38	-1.33	0.75	-0.88	35.24	+1.01
Centralia	1.46	.....	2.66	.....	2.73	.....	4.44	.....	5.21	.....	7.02	.....	2.15	.....	8.46	.....	0.38	.....	1.36	.....	2.92	.....	1.42	.....	40.21	.....
Chillicothe	1.09	-0.39	1.09	-0.36	3.97	+1.49	3.47	+0.25	0.96	-3.13	11.36	+6.63	2.98	-0.44	5.63	+1.67	0.40	-4.38	0.49	-2.65	1.75	-0.37	1.32	-0.10	34.51	-1.78
Clifton Hill	1.86	+0.14	1.81	+0.07	3.78	+1.04	3.87	+0.01	3.09	-1.31	8.10	+3.71	3.78	+0.42	5.16	+1.36	0.30	-4.24	1.06	-1.46	2.70	+0.72	1.03	-0.69	36.04	-0.23
Columbia	1.66	-0.26	2.45	+0.41	2.66	-0.28	4.52	+0.75	5.00	+0.54	3.12	-1.64	2.33	-1.16	8.71	+5.11	0.58	-3.77	1.33	-1.28	4.00	+1.80	1.16	-0.70	37.52	-0.48
Conception	0.93	+0.14	1.53	+0.38	2.69	+1.04	3.26	+0.53	3.99	-0.07	8.96	+4.01	0.59	-4.08	2.94	-0.70	0.64	-4.00	0.19	-2.69	2.28	+0.54	0.69	-0.19	28.69	-5.09
Edgerton	1.39	+0.54	1.46	+0.12	3.00	+0.74	4.41	+1.36	1.30	-2.90	11.11	+6.24	0.26	-3.24	3.65	-0.39	0.78	-3.81	0.70	-1.92	2.43	+0.46	1.28	+0.16	31.80	-2.64
Edina	1.11	-0.62	1.01	-0.12	4.36	+2.37	4.71	+1.58	1.52	-2.33	7.32	+1.88	2.00	-0.47	5.39	+1.29	0.25	-4.37	1.40	-0.86	2.62	-0.45	0.84	-0.50	32.46	-2.60
Elsberry	3.28	.....	3.07	.....	2.59	.....	5.52	.....	1.64	.....	4.01	.....	2.91	.....	4.13	.....	0.40	.....	2.51	.....	1.97	.....	1.28	.....	33.81	.....
Farber	2.43	.....	2.99	.....	3.53	.....	5.58	.....	2.99	.....	6.73	.....	8.82	.....	6.99	.....	0.29	.....	2.29	.....	2.28	.....	1.16	.....	46.08	.....
Fayette	1.14	-0.65	1.49	-0.21	2.07	-0.75	3.25	-0.30	3.36	-0.96	10.17	+5.60	1.86	-1.39	8.10	+4.54	0.29	-4.67	1.36	-1.53	2.56	+0.46	1.10	-0.56	36.75	-0.42
Fulton	1.95	-0.07	2.60	+0.93	3.02	+0.06	6.53	+2.52	5.80	+1.20	3.00	-1.40	1.37	-1.92	7.10	+3.45	0.37	-4.12	2.60	-0.82	3.54	+1.23	1.70	-0.31	39.58	+0.75
Gallatin	0.93	-0.29	2.10	+0.51	3.28	+0.96	3.66	+0.10	0.86	-3.86	7.85	+2.79	1.58	-2.54	5.49	+1.69	0.59	-4.61	2.80	-0.38	2.37	+0.29	1.34	+0.06	32.85	-5.28
Gorin	1.34	-0.04	1.18	-0.22	4.36	+2.14	4.57	+1.16	1.66	-2.91	7.10	+2.43	2.15	-1.46	5.74	+2.28	0.18	-4.49	1.36	-1.62	2.61	+0.58	0.64	-0.76	32.59	-2.91
Grant City	0.81	-0.16	1.06	-0.05	3.21	+1.20	2.80	-0.16	1.56	-2.67	9.88	+4.88	5.31	+0.68	4.43	+0.49	0.67	-4.02	0.29	-2.75	1.65	-0.20	0.95	-0.11	32.62	-2.87
Hannibal	1.95	+0.23	1.96	+0.10	3.66	+1.06	4.48	+1.29	3.56	-0.79	7.39	+3.49	2.46	-0.63	9.17	+5.83	0.23	-3.74	1.68	-0.71	1.83	-0.23	1.46	-0.08	39.83	+5.82
Hermann	2.46	+0.53	2.59	+0.94	2.31	-0.52	6.58	+2.55	4.76	+0.59	5.18	+0.81	2.79	-0.55	4.87	+1.20	1.51	-2.87	1.79	-1.84	3.52	+1.05	1.73	-0.08	40.09	+1.81
Kahoka	0.80	-1.08	0.95	-0.12	2.41	+0.30	4.98	+1.72	2.95	-1.31	6.38	+1.47	2.00	-0.12	5.10	+1.82	0.30	-4.24	2.06	-3.99	3.17	-1.05	0.99	-0.70	32.09	-2.59
Kansas City	1.28	+0.09	0.98	-0.77	1.14	-1.39	7.04	+3.90	2.85	-1.80	10.59	+6.00	1.18	-2.95	4.64	+0.55	0.54	-4.02	0.95	-1.97	2.45	+0.62	0.68	-0.65	34.72	-2.39
Kansas City University	1.25	.....	1.81	.....	1.11	.....	5.25	.....	3.38	.....	9.93	.....	1.13	.....	4.30	.....	0.58	.....	0.78	.....	2.71	.....	0.72	.....	32.95	.....
Kidder	0.90	-0.32	1.56	+0.02	6.05	+2.86	3.92	+0.64	0.76	-3.89	8.53	+3.56	2.13	-1.75	4.04	+0.08	0.57	-4.63	3.10	+0.03	1.66	-0.49	1.46	+0.19	33.68	-3.70
King City	0.91	-0.23	1.64	+0.04	2.75	+0.69	3.39	+0.09	2.15	-2.06	6.92	+1.61	1.79	-1.75	2.91	-0.77	0.36	-5.06	3.94	-1.96	2.31	+0.35	0.84	-0.24	26.81	-9.29
Kirksville	0.80	-0.72	1.81	+0.28	4.24	+1.30	3.17	-0.93	1.07	-4.26	7.53	+2.47	4.79	+0.49	6.21	+2.09	0.23	-4.95	1.84	-1.32	2.16	+0.04	1.12	-0.64	34.97	-6.15
La Belle	1.21	.....	0.71	.....	3.80	.....	3.57	.....	1.65	.....	9.72	.....	1.66	.....	4.31	.....	0.41	.....	0.63	.....	2.12	.....	1.18	.....	31.92	.....
Lawson	1.15	.....	1.72	.....	3.07	.....	3.24	.....	3.50	.....	9.60	.....	2.84	.....	7.91	.....	0.41	.....	1.35	.....	1.89	.....	1.15	.....	37.45	.....
Linneus	1.53	.....	0.96	.....	3.07	.....	3.24	.....	3.50	.....	9.60	.....	2.84	.....	7.91	.....	0.41	.....	1.35	.....	1.89	.....	1.15	.....	37.45	.....
Louisiana	1.77	-0.38	3.35	+1.27	2.74	-0.73	3.92	+0.20	3.04	-1.66	6.02	+1.79	4.09	+0.49	6.41	+1.87	0.17	-4.26	2.64	-0.64	2.62	+0.16	1.20	-0.70	37.97	-2.59
Lucerne	0.94	-0.08	0.76	-0.44	4.87	+2.82	4.24	+0.68	1.58	-3.15	5.62	-0.02	1.54	-1.52	5.67	+1.23	0.23	-5.43	1.21	-2.32	1.16	-1.12	0.89	-0.72	28.71	-10.07
Macon	1.80	-0.40	1.21	-0.49	4.55	+1.71	3.18	-0.53	2.55	-2.08	8.60	+3.88	5.97	+2.56	9.34	+5.53	0.27	-4.17	0.96	-1.93	3.06	+0.87	1.26	-0.38	42.21	+4.62
Madison	1.45	.....	2.09	.....	3.14	.....	3.74	.....	4.86	.....	12.87	.....	7.10	.....	7.26	.....	0.18	.....	1.02	.....	2.85	.....	1.24	.....	47.80	.....
Maryville	0.71	-0.29	1.03	-0.40	2.34	+0.47	3.28	+0.27	3.38	-1.27	7.74	+2.63	0.87	-4.36	3.30	-0.68	0.92	-3.76	0.31	-2.66	2.11	+0.19	0.48	-0.60	26.47	-10.46
Memphis	0.88	-0.65	1.03	+0.06	5.09	+2.73	5.26	+2.06	1.56	-2.45	7.09	+1.96	2.48	-0.32	5.92	+1.95	0.30	-3.88	1.75	-1.08	2.38	-0.61	1.17	-0.11	34.91	+0.56
Mexico	1.82	-0.21	3.16	+1.31	3.16	+0.25	5.17	+1.42	4.90	+0.30	7.91	+3.17	3.74	+0.53	9.65	+5.80	0.37	-4.60	2.25	-0.82	3.08	+0.85	1.92	+0.01	47.18	+8.01
Milan	1.07	-0.10	1.11	-0.27	3.99	+1.74	3.90	-0.07	1.33	-3.49	9.96	+4.86	2.09	-0.99	6.75	+2.51	0.28	-5.26	1.81	-2.16	1.48	-0.70	0.98	-0.83	34.75	-4.76
Moberly	1.61	.....	1.11	.....	4.26	.....	3.47	.....	3.61	.....	13.09	.....	3.54	.....	5.47	.....	0.25	.....	1.67	.....	2.73	.....	0.78	.....	41.59	.....
Monroe City	1.71	-0.20	1.79	+0.38	3.49	+0.60	4.70	+1.03	5.12	+0.72	7.46	+2.38	6.29	+2.63	13.04	+8.72	0.41	-4.41	0.39	-2.21	2.61	+0.29	0.63	-1.30	47.64	+8.63
Oregon	1.04	+0.11	1.40	+0.03	1.70	-0.26	3.81	+0.55	2.33	-2.20	7.19	+1.82	1.36	-2.82	2.35	-1.55	0.50	-4.60	1.13	-2.62	2.07	+0.09	0.89	-0.15	24.80	-11.50
Palmyra	1.46	-0.54	1.47	-0.27	3.27	+0.59	5.09	+1.36	3.87	-0.44	5.94</															



## Monthly and Annual Precipitation for the Year 1939, with Departures from Normal—Concluded

	January		February		March		April		May		June		July		August		September		October		November		December		Annual		
Stations	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	Precipitation	Departure	
Warrensburg .....	1.56	-0.22	1.43	-0.45	1.97	-1.12	4.79	+1.13	2.66	-2.06	5.24	+0.18	0.87	-3.10	5.05	+1.08	0.86	-3.92	0.84	-2.18	2.86	+0.64	1.41	-0.13	29.54	-10.15	
Warsaw .....	1.70	-0.44	2.82	+0.58	2.81	-0.74	4.07	-0.39	5.10	+0.10	4.12	-1.18	0.49	-3.52	4.31	-0.31	0.37	-4.66	2.25	-1.55	3.08	+0.44	1.00	-1.12	32.12	-12.79	
Waverly .....	1.79	+0.25	1.06	-0.60	2.49	-0.27	3.04	-0.67	1.22	-3.39	6.39	+1.43	1.57	-2.81	4.62	+0.93	0.63	-4.71	0.52	-2.78	2.10	-0.18	1.26	-0.32	26.69	-13.12	
Division means..	2.25	+0.07	2.70	+0.73	2.20	-0.96	4.32	+0.27	5.98	+0.79	5.38	+0.39	2.24	-1.48	3.76	-0.12	0.74	-8.48	1.92	-1.09	2.97	+0.34	1.46	-0.56	35.92	-5.09	
Southeastern Division																											
Advance .....	5.21	.....	5.89	.....	5.51	.....	6.21	.....	1.70	.....	1.15	.....	4.13	.....	2.69	.....	1.10	.....	3.47	.....	1.72	.....	2.10	.....	40.88	.....	
Annapolis .....	4.49	.....	3.88	.....	4.12	.....	6.91	.....	2.54	.....	6.54	.....	2.21	.....	4.27	.....	1.26	.....	4.42	.....	2.27	.....	2.03	.....	44.94	.....	
Arcadia .....	4.76	+1.77	4.29	+1.81	4.65	+0.60	5.89	+1.07	2.96	-1.28	4.71	+0.57	3.41	-0.71	3.39	-0.98	0.83	-3.15	1.72	-1.73	2.95	-0.17	2.14	-0.71	41.70	-2.91	
Bellevue .....	3.68	.....	3.04	.....	4.03	.....	6.84	.....	2.81	.....	3.19	.....	5.17	.....	3.80	.....	1.20	.....	2.66	.....	3.65	.....	1.60	.....	41.67	.....	
Birch Tree(near).....	4.94	+1.76	4.22	+1.72	3.59	-0.39	6.69	+1.93	6.29	+1.94	6.34	+1.93	2.07	-1.51	2.77	-1.99	1.88	-1.80	2.14	-1.14	4.41	+1.25	1.85	-0.90	47.19	+2.80	
Bragg City .....	5.29	.....	9.15	.....	3.38	.....	5.70	.....	3.57	.....	3.98	.....	3.30	.....	1.70	.....	1.35	.....	2.67	.....	2.12	.....	2.43	.....	44.64	.....	
Campbell .....	5.41	+0.11	8.34	+5.01	3.66	-2.26	7.04	+2.78	3.48	-1.53	2.50	-1.74	2.69	-0.79	4.30	-1.68	2.23	-1.64	1.82	-1.28	1.52	-2.18	1.12	-1.83	45.11	-7.03	
Cape Girardeau .....	5.24	+1.26	5.60	+3.20	4.93	+1.09	6.51	+2.63	2.64	-1.43	3.05	-1.25	2.68	-0.74	2.86	-1.04	1.14	-2.87	2.77	-0.53	1.37	-2.21	1.33	-2.34	40.12	-4.23	
Caruthersville .....	5.95	+0.76	8.79	+5.41	3.58	-0.88	6.22	+1.70	4.68	+0.24	4.70	+0.89	3.22	-0.07	2.00	-1.69	1.75	-1.46	1.17	-2.19	1.75	-2.10	2.53	-2.01	46.34	-1.40	
Centerville .....	5.00	.....	4.03	.....	4.25	.....	7.11	.....	3.15	.....	4.99	.....	2.59	.....	4.91	.....	0.96	.....	2.77	.....	3.42	.....	2.01	.....	45.19	.....	
Crystal City .....	3.52	.....	3.43	.....	1.99	.....	6.38	.....	2.72	.....	6.70	.....	5.64	.....	7.00	.....	0.92	.....	0.80	.....	1.95	.....	1.40	.....	42.45	.....	
Cuba .....	3.44	.....	3.33	.....	2.85	.....	6.47	.....	3.89	.....	5.14	.....	2.87	.....	3.25	.....	1.21	.....	1.43	.....	3.48	.....	1.18	.....	38.54	.....	
Dexter .....	5.75	+0.71	8.14	+5.06	4.27	-0.61	6.99	+2.40	4.56	-0.23	6.12	+1.71	4.09	+0.97	4.76	+0.64	1.28	-3.24	2.53	-1.73	1.87	-2.05	2.57	-1.42	52.93	+2.21	
Doniphan .....	5.31	+1.21	6.54	+3.23	5.24	+0.85	6.40	+1.47	4.04	-0.32	1.45	-2.91	2.50	-1.54	3.53	-0.71	3.65	+0.04	4.41	+1.35	2.08	-1.34	1.56	-1.72	46.71	-0.83	
Farmington .....	3.71	+0.57	4.57	+2.05	4.59	+0.67	5.44	+0.92	1.99	-3.08	4.07	+0.19	9.38	+5.82	4.32	+0.02	1.30	-3.10	1.57	-1.87	2.69	-0.13	1.08	-1.72	44.11	+0.34	
Fisk .....	4.97	-0.04	7.47	+4.21	4.18	-0.64	6.87	+3.17	1.94	-1.56	2.03	-1.83	3.48	+0.10	1.84	-1.41	1.38	-2.86	3.27	+0.31	1.71	-0.95	1.96	-1.51	41.10	-3.01	
Fredericktown .....	3.37	-0.34	3.79	+1.16	4.30	+0.65	5.91	+1.43	2.77	-1.32	6.91	+2.68	3.72	+0.50	3.63	-0.63	0.76	-3.20	2.02	-2.37	2.41	-0.91	1.43	-1.74	41.02	-4.09	
Goodland .....	3.82	+1.12	3.57	+1.29	2.97	-0.92	6.95	+2.06	3.83	-0.68	5.39	+1.33	2.69	-1.00	3.31	-1.03	0.70	-3.16	2.46	-1.13	3.58	+0.86	2.12	-0.33	41.29	-1.59	
Greenville .....	4.91	+1.59	5.36	+2.64	4.06	-0.20	6.52	+1.82	2.48	-1.70	2.96	-1.73	3.18	-0.58	3.53	-0.75	1.03	-2.29	1.79	+1.51	1.55	-1.81	1.20	-0.36	41.57	-3.66	
Jackson .....	5.73	+1.79	6.82	+3.94	5.41	+1.24	6.46	+2.12	2.82	-1.45	2.87	-1.82	3.13	-0.41	2.53	-1.55	1.28	-2.74	1.92	-1.60	2.04	-1.34	2.29	-1.14	43.30	-2.96	
Jerome .....	2.59	+0.61	3.23	+0.91	2.24	-0.61	6.94	+3.11	4.36	+0.05	3.55	+0.10	4.84	+1.54	4.53	+0.25	0.38	-3.21	1.53	-0.49	2.68	+0.21	1.71	-0.12	38.88	+2.35	
Koshkonong .....	5.46	+1.84	4.57	+1.71	4.10	0.00	6.78	+1.76	6.40	+1.85	3.20	-1.30	0.94	-2.83	2.55	-1.61	1.59	-2.05	2.65	-0.57	2.97	+0.29	2.16	-1.32	43.37	-2.81	
Leeper .....	5.34	+1.44	4.57	+1.92	3.61	-0.03	6.65	+1.73	3.53	-0.87	4.45	-0.99	0.56	-2.76	3.85	-0.26	1.10	-2.13	4.53	+0.62	2.40	-0.98	1.97	-1.81	42.56	-4.12	
Licking(near).....	2.97	.....	2.99	.....	2.07	.....	5.26	.....	4.45	.....	4.35	.....	2.03	.....	4.38	.....	2.54	.....	2.19	.....	2.74	.....	1.78	.....	37.75	.....	
Marble Hill .....	5.75	+1.85	4.60	+1.52	4.50	+0.22	5.80	+1.31	2.15	-2.34	2.80	-1.68	3.10	-0.92	4.40	+0.28	1.15	-2.73	1.15	-2.27	2.59	-0.96	1.83	-1.84	39.82	-7.53	
Meramec Park .....	4.05	.....	3.85	.....	2.35	.....	5.42	.....	4.06	.....	3.65	.....	4.33	.....	2.84	.....	1.06	.....	1.01	.....	3.86	.....	1.23	.....	37.71	.....	
Morehouse .....	5.43	+0.52	7.92	+4.18	4.84	-0.07	7.61	+2.70	3.78	-0.50	4.27	-1.76	3.08	+0.07	4.20	+0.29	1.23	-2.69	2.56	-0.97	2.10	-1.53	2.17	-2.05	47.39	-1.75	
New Madrid .....	5.71	+0.22	10.09	+6.34	3.68	-1.15	5.57	+0.99	4.48	+0.05	5.42	+0.92	3.94	-0.08	2.80	-1.30	1.54	-2.05	2.33	-1.44	1.71	-2.32	2.46	-2.15	49.73	-1.92	
Owensville .....	2.51	+0.69	3.16	+1.50	2.27	-1.05	3.67	+0.36	4.22	-0.58	3.00	-1.65	4.16	+0.54	1.26	-2.58	0.75	-2.74	0.15	-3.28	2.52	-0.29	1.15	-1.13	28.82	-10.26	
Pacific .....	4.54	+2.18	2.62	+0.48	1.85	-1.86	7.29	+3.12	3.85	-1.10	3.22	-1.31	8.66	+5.02	6.23	+2.54	1.63	-2.17	1.50	-1.53	2.25	-0.50	1.82	-0.38	45.46	+4.49	
Parma .....	5.85	+0.59	9.36	+6.48	2.94	-2.42	6.84	+2.60	3.82	-0.34	2.05	-1.43	4.02	+0.13	4.11	-0.46	1.60	-3.45	2.17	-0.97	1.92	-2.55	2.11	-2.67	46.79	-4.49	
Poplar Bluff .....	5.26	+0.84	6.56	+3.67	4.23	-0.13	6.13	+1.62	3.05	-1.47	3.13	-0.99	2.06	-1.88	2.66	-1.91	1.32	-2.57	2.94	-0.72	2.22	-1.26	2.24	-1.75	41.80	-6.55	
Richwoods .....	3.32	.....	3.06	.....	3.25	.....	7.52	.....	4.00	.....	3.00	.....	5.74	.....	7.34	.....	1.09	.....	3.35	.....	2.47	.....	1.49	.....	45.63	.....	
Rolla .....	3.15	+0.69	2.62	+0.57	2.10	-1.53	5.71	+1.49	4.72	-0.03	3.96	-0.45	3.38	-0.01	3.93	-0.51	1.09	-3.05	1.90	-1.56	3.51	+0.83	1.63	-0.55	37.70	-4.11	
St. Louis .....	4.08	+1.74	3.22	+0.66	3.35	-0.03	5.85	+2.04	4.74	-1.70	3.24	-0.58	2.07	-0.91	6.06	+7.07	1.01	-2.45	0.77	-1.95	2.43	-0.40	1.43	-0.78	40.15	+2.71	
St. Louis Airport .....	3.93	.....	2.82	.....	1.63	.....	5.71	.....	1.97	.....	4.75	.....	1.70	.....	7.62	.....	1.11	.....	1.65	.....	2.42	.....	1.25	.....	36.56	.....	
St. Louis University .....	4.42	+1.82	3.22	+0.91	3.46	+0.12	5.61	+1.75	2.75	-1.44	3.27	-0.32	2.31	-0.87	10.61	+6.67	0.91	-2.85	0.63	-2.53	1.95	-0.59	0.84	-1.60	39.98	+1.07	
Salem .....	3.34	+0.62	4.68	+2.40	3.54	-0.33	8.21	+3.71	3.97	-0.54	6.35	+1.70	1.71	-1.79	8.91	+4.34	1.64	-2.24	2.34	-1.28	2.90	+0.26	1.92	-0.62	49.51	+6.23	
Sikeston .....	5.50	+0.64	8.71	+5.49	5.19	+0.73	6.60	+1.98	3.22	-1.02	2.29	-1.90	2.92	-0.80	3.17	-0.63	1.34	-2.54	2.43	-0.84	1.84	-1.72	2.19	-1.75	45.40	-2.36	
Union .....	2.87	+0.55	3.09	+0.89	2.48	-0.82	5.56	+1.20	5.07	+0.53	5.28	+0.98	7.86	+3.92	4.32	+0.38	1.40	-2.79	1.16	-2.32	2.79	+0.04	1.63	-0.58	43.51	+1.22	
Valley Park .....	4.33	+2.07	2.84	+0.95	2.17	-1.20	7.15.15																				



























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